

कोचीन शिपयार्ड लिमिटेड/COCHIN SHIPYARD LIMITED
कोच्ची/COCHIN - 682 015

पोत निर्माण प्रभाग/SHIP BUILDING DIVISION

आउटसोर्सिंग विभाग
OUTSOURCING DEPARTMENT



निविदा दस्तावेज़/TENDER DOCUMENT

TENDER NO. SB-OSD/TSHD/932/2025 Dtd 07-03-2025

**HEAT TREATMENT OF STERN TUBE IN TRAILING
SUCTION HOPPER DREDGER (TSHD) SH.037**



MARCH- 2025

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SUCTION HOPPER DREDGER (TSHD) SH.037****निविदा सूचना / TENDER NOTICE****कोचीन शिपयार्ड लिमिटेड / COCHIN SHIPYARD LIMITED****पोत निर्माण प्रभाग / SHIP BUILDING DIVISION****आउटसोर्सिंग विभाग****OUTSOURCING DEPARTMENT**

SB-OSD/TSHD/932/2025

07th March - 2025**निविदा सूचना / TENDER NOTICE****संक्षिप्त विवरण / BRIEF DETAILS**

निविदा जांच संख्या और तारीख Tender enquiry No. and date	SB-OSD/TSHD/932/2025 Dtd: 07.03.2025
कार्य का नाम Name of work	HEAT TREATMENT OF STERN TUBE IN TRAILING SUCTION HOPPER DREDGER (TSHD) SH.037
निविदाएं प्राप्त करने की अंतिम तिथि और समय Last date & time of receipt of Tenders (भाग/Part I – तकनीकी-वाणिज्यिक बोली और भाग - II मूल्य बोली/Techno-Commercial Bid & Part II-Price Bid)	18 th March - 2025 at 15.00 Hrs IST
भाग I (तकनीकी-वाणिज्यिक) बोली खोलने की तिथि और समय Date & time of opening of Part I (Techno – Commercial) Bid	18 th March - 2025 at 15.30 Hrs IST
संपर्क व्यक्ति Contact Person	<u>For Commercial queries:</u> Mr. Adarsh S, AM (Outsourcing Department) Mob No : 87146 30926 <u>For Technical queries:</u> Mr. Charles Paul K J, SM (Hull Fabrication), Mob No: 99958 06162



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नोट: इस निविदा के खिलाफ उद्धृत करने से पहले, संभावित बोलीदाता से अनुरोध है कि वे निविदा जांच दस्तावेज़ (और अनुलग्नक, यदि कोई हो) को पूरी तरह से और सावधानी से पढ़ लें। निविदा के नियमों और शर्तों में विचलन अत्यधिक हतोत्साहित किया जाता है। इसलिए, निर्धारित किसी भी नियम और शर्तों, योग्यता मानदंड, ईएमडी जमा करने से छूट के लिए पात्रता, दस्तावेज़ीकरण/प्रक्रियात्मक आवश्यकताओं आदि के संबंध में स्पष्टीकरण, यदि कोई हो, के संबंध में उत्पन्न होने वाले किसी भी संदेह को संभावित बोलीदाता द्वारा बोली जमा करने से पहले निरपवाद रूप से उपरोक्त सूचित व्यक्तियों के माध्यम से अनिवार्य रूप से स्पष्ट किया जाएगा।

Note: Before quoting against this Tender, the prospective bidder is requested to go through the Tender Enquiry document (& Annexes, if any) thoroughly & carefully. Deviations to the Terms & Conditions of the Tender are highly discouraged. Therefore, any doubts arising in respect of any of the Terms & Conditions stipulated, Qualification Criteria, Eligibility for exemption from submission of EMD, clarification if any w.r.t. Documentation / Procedural requirements, etc. shall get clarified by the prospective bidder through above noted contact persons invariably before the submission of the Bid.

1. कोचीन शिपयार्ड लिमिटेड, एक प्रमुख पोत निर्माण और पोत मरम्मत उद्योग और वैश्विक पोत निर्माण के मोर्चे पर विख्यात, इच्छुक, प्रतिष्ठित, संसाधन संपन्न और वित्तीय रूप से सक्षम कंपनियों/ठेकेदारों को एकल चरण दो भाग बोलियों को प्रस्तुत करने हेतु आमंत्रित करता है।

Cochin shipyard Limited, a leading Ship Building & ship repair industry and also well known player on the global ship building front, invites interested, reputed, resourceful and financially solvent firms/contractors to submit single stage two part bids.

2. निर्धारित प्रपत्र में मुहरबंद प्रतिस्पर्धी निविदाएं निविदा जांच के अनुलग्नक में उल्लिखित नियम और शर्तों के अनुसार होनी चाहिए।

The Sealed competitive tenders in the prescribed form should be as per the terms and conditions as mentioned in the annexure to tender enquiry.

3. निविदाएं दो बोली प्रणाली में प्रस्तुत की जानी हैं; भाग I: तकनीकी वाणिज्यिक बोली और भाग II: सॉफ्ट कॉपी के रूप में मूल्य बोली और निर्धारित तिथि और समय पर या उससे पहले अधोहस्ताक्षरी के पास पहुंच जानी चाहिए:

The tenders are to be submitted in two bid system; **Part I : Techno Commercial Bid** and **Part II : Price Bid** as Soft copy and should reach the undersigned on or before the date and time as stipulated:

4. **MODE OF SUBMISSION OF BIDS**

- a. निविदा केवल ई-मेल के माध्यम से सॉफ्ट कॉपी में प्रस्तुत की जानी चाहिए। सीएसएल किसी अन्य प्रकार की निविदा स्वीकार नहीं करेगा।

Tender should be submitted in soft copy via E-mail only. CSL will not accept any other mode of tender.

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- b. ई-मेल के विषय में स्पष्ट रूप से निविदा पृष्ठताछ संख्या और जमा करने की देय तिथि का उल्लेख होना चाहिए। मूल्य बोलियों को पासवर्ड से सुरक्षित किया जाना चाहिए और जब तक मांगा नहीं जाता तब तक पासवर्ड अग्रेषित नहीं किया जाना चाहिए।

The subject of the E mail should clearly state the tender enquiry number and due date of submission. Price Bids are to be password protected and password is not to be forwarded unless asked for.

- c. निविदा दस्तावेज़ पीडीएफ प्रारूप में प्रस्तुत किया जाना चाहिए और पीडीएफ प्रारूप से सीधे खोला जा सकता है। उपरोक्त का अनुपालन न करने वाले प्रस्तावों को बिना किसी सूचना के सरसरी तौर पर खारिज कर दिया जाएगा।

Tender Documents should be submitted in PDF Format and Directly openable from the PDF format. Offers not complying with the above shall be summarily rejected without further intimation.

- d. निविदाएं, तकनीकी - वाणिज्यिक बोली (भाग-I) और मूल्य बोली (भाग-II) अलग से ई-मेल के माध्यम से **“SB-OSD/TSHD/932/2025”** विषय के साथ प्रस्तुत की जाएगी।

Tenders, Techno- commercial bid (Part-I) and Price bid(Part -II) shall be submitted separately via email , with subject as **“ SB-OSD/TSHD/932/2025”** to:

- (i) ashtal.antony@cochinshipyard.in
(ii) adarsh.s@cochinshipyard.in

प्रतिलिपि / Copy to:

- (ii) madhu.pk@cochinshipyard.in
(iii) philip.thomas@cochinshipyard.in

5. बोलियां दिनांक **18 मार्च - 2025** को अपराह्न **15.00** बजे या उससे पहले कोचीन शिपयार्ड लिमिटेड में प्राप्त की जाएंगी और भाग I तकनीकी - वाणिज्यिक बोली उसी दिन अपराह्न **15.30** बजे खोली जाएगी।

The Bids shall be received at Cochin Shipyard Ltd on or before 15.00 Hrs on 18th March - 2025 and Part I Techno-Commercial Bid will be opened at **15.30 Hrs** on the same day.

6. देर से आनेवाली निविदाएं/शर्तों वाली निविदाएं सरसरी तौर पर खारिज कर दी जाएंगी।

Late tenders / tenders with conditions will be summarily rejected.

7. सीएसएल ई-मेल द्वारा भेजी गई निविदाओं के विलंब, खो जाने या प्राप्त न होने की कोई ज़िम्मेदारी नहीं लेगा।

CSL takes no responsibility for delay, loss or non-receipt of tenders sent by e-mail.

8. मूल्य बोली खोलने के लिए केवल तकनीकी रूप से योग्य बोलियों पर विचार किया जाएगा। तकनीकी पहलुओं और वाणिज्यिक शर्तों दोनों के लिए बोलियों का मूल्यांकन करने के बाद, तकनीकी-व्यावसायिक रूप से योग्य बोलीदाताओं को भाग-II

Only technically qualified bids will be considered for price bid opening. After evaluating the bids for both technical aspects and commercial terms, the techno-commercially

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qualified bidders will be intimated regarding the date and time of opening of Part II - Price Bid.

9. केवल तकनीकी - वाणिज्यिक बोली खोलने को अनुबंध देने के लिए प्रस्ताव की स्वीकृति के रूप में नहीं माना जा सकता है।
Merely opening of Techno-Commercial Bid cannot be construed as acceptance of offer for awarding of contract.
10. भाग I (तकनीकी-वाणिज्यिक) बोली के साथ निम्नलिखित प्रस्तुत किया जाएगा:

The following shall be submitted along with Part I (Techno-commercial) Bid:-

- i. अनुलग्नक I, II, III, IV, V, VI और परिशिष्ट -A, B, C & D में रखे गए पूछताछ के नियम और शर्तें, सामान्य शर्तें, तकनीकी विनिर्देश और आरेखण सहित सभी पृष्ठों पर विधिवत हस्ताक्षरित मूल निविदा दस्तावेज़।

Original tender document duly signed on all pages - including Terms & conditions of enquiry, general conditions, technical specification and drawings placed at Annexure I, II, III, IV, V, VI & Appendix- A, B, C & D

- ii. अनुलग्नक IV में तकनीकी वाणिज्यिक जांच सूची पूरी तरह से भरी हुई है और विधिवत हस्ताक्षरित है। विधिवत भरी हुई तकनीकी वाणिज्यिक जांच सूची प्रस्तुत न करने पर बोलियों को अस्वीकार कर दिया जाएगा।

The techno commercial Check List at Annexure IV filled up completely and duly signed. The non submission of duly filled techno commercial checklist will lead to the rejection of the bids.

- iii. गैर-मूल्य बोली प्रारूप की प्रतिलिपि (कीमत/अंकों के बिना मूल्य बोली)।

Copy of un-priced bid format (price bid WITHOUT prices/numerals)

- iv. निविदा पूछताछ नियम और शर्तों से विचलन/बहिष्करण की सूची (यदि कोई हो)।

List of deviations/exclusions from the tender enquiry terms and conditions (if any).

11. पूर्व अनुबंध अखंडता संधि / PRE CONTRACT INTEGRITY PACT

निविदा में भाग लेने वाले बोलीदाताओं को पूर्व अनुबंध अखंडता समझौते पर हस्ताक्षर करना होगा, यदि बोली 1 करोड़ रुपए से अधिक है।

The bidders who are participating in the tender shall sign the pre contract integrity pact, in case the bid is above Rs 1 crore.

12. एमएसएमई - विशेषाधिकार / MSME- PRIVILEGES

सीएसएल वेबसाइट (www.cochinshipyard.in) के अनुसार एमएसएमई, स्टार्ट-अप आदि से संबंधित भारत सरकार की सार्वजनिक खरीद नीति पहल इस निविदा के लिए लागू होगी।

Public procurement policy initiatives of Govt. of India, pertaining to MSME's, Start-up etc. as per CSL website (www.cochinshipyard.in) shall be applicable for this tender.

13. कोचीन शिपयार्ड लिमिटेड (सीएसएल) ने ट्रेड्स पोर्टल अर्थात आरएक्सआईएल, एम1 एक्सचेंज और इनवॉयस मार्ट में पंजीकरण कराया है। वे विक्रेता जिन्होंने ट्रेड्स पोर्टल में पंजीकरण कराया है, वे ट्रेड्स पोर्टल के ज़रिए भुगतान को संसाधित

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करने के लिए संबंधित निष्पादन अधिकारी को सूचना के तहत संबंधित पोर्टल में चालान अपलोड कर सकते हैं। आपूर्तिकर्ताओं से अनुरोध है कि ट्रेड्स पोर्टल में चालान अपलोड करने से पहले, जहां भी लागू हो, गुणवत्ता निरीक्षण स्थिति के संबंध में संबंधित निष्पादन अधिकारी से जांच करें।

Cochin Shipyard Limited (CSL) has registered in the **TReDS Portal viz., RXIL, M1xchange and Invoice Mart**. Those vendors who have registered in the TReDS portal may upload the invoice in the respective portal under an intimation to concerned executing officer for processing the payment through TReDS portal. Suppliers are requested to check with the concerned executing officer regarding the Quality inspection status, where ever applicable, before uploading the invoices in TReDS portal.

14. सीएसएल के पास पूरा ऑर्डर देने या ऑर्डर की मात्रा का कुछ हिस्सा देने या काम को दो या दो से अधिक फर्मों/उपठेकेदारों में विभाजित करने या किसी भी निविदा को स्वीकार या अस्वीकार करने, या निविदा खोलने की तारीख बढ़ाने, और या कुल निविदा प्रक्रिया को रद्द करने और सभी को अस्वीकार करने का अधिकार सुरक्षित है। अनुबंध प्रदान करने से पहले किसी भी समय निविदाएं। सीएसएल प्रभावित फर्म(फर्मों) के प्रति कोई दायित्व नहीं निभाएगा, सीएसएल की कार्रवाई के आधार के बारे में प्रभावित फर्म(फर्मों) को सूचित करने का कोई दायित्व नहीं होगा। बोलीदाताओं से अनुरोध है कि वे नोट करें और तदनुसार बोली लगाएं।

CSL reserves the right to place order whole or part of order quantity or split the work on two or more firms/subcontractors or to accept or reject any tender, or extend the tender opening date, and or to cancel the total tender process and reject all tenders at any time prior to award of the contract. CSL will not incur any liability to the affected firm(s), any obligation to inform the affected firm(s) of the grounds for CSL's action. Bidders are requested to note and quote accordingly.

15. मुख्य महाप्रबंधक, पोत निर्माण प्रभाग, कोचीन शिपयार्ड लिमिटेड, निविदा या उसके हिस्से को स्वीकार करने हेतु अधिकृत व्यक्ति है, जो न्यूनतम निविदा को स्वीकार करने हेतु स्वयं को बाध्य नहीं करता है और बिना कोई कारण बताए प्राप्त किसी या सभी निविदाओं को अस्वीकार करने का अधिकार सुरक्षित रखता है।

Chief General Manager, Ship Building Division, Cochin Shipyard Limited, is the authorized person to accept the tender or part thereof, who does not bind himself to accept the lowest tender and reserves the authority to reject any or all of the tenders received without assigning any reason.



**कृते उप महाप्रबंधक / For Deputy General Manager
आउटसोर्सिंग विभाग / Outsourcing Department**

ANNEXURE- I

जांच की नियम और शर्तें / TERMS & CONDITIONS OF ENQUIRY

**HEAT TREATMENT OF STERN TUBE IN TRAILING SUCTION HOPPER
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1. कार्य का विवरण / DESCRIPTION OF WORK

1.1. This tender enquiry pertains to the awarding of contract for 'HEAT TREATMENT OF STERN TUBE IN TRAILING SUCTION HOPPER DREDGER (TSHD) SH.037'.

All the work as indicated above has to be executed as per the following documents:

1.1.1. Cochin Shipyard Ltd - Terms and conditions (Annexure I)

1.1.2. Cochin Shipyard Ltd - General conditions (Annexure II)

1.1.3. Enquiry specification (Annexure III)

1.1.4. Relevant drawings and other data as enclosed.

1.2. Cochin Shipyard Ltd. (CSL) is constructing a 12000 Cu.M capacity TSHD Dredger for M/s Dredging Corporation of India. The vessel has 02 No.s of stern tubes which to be fitted in the vessel. Stern tube has to be integrated into the hull structure by welding, during the time of welding the stern tube needs to be heated to a temperature of 100-150 degree celsius, followed by PWHT (Post Weld Heat treatment) by raising to a temperature of 50-100 degree celcius/hour and reducing the same at a rate of 50-100 degree celcius/hour. CSL intends to outsource the heat treatment and PWHT requirement for the welding of stern tube to the hull structure.

1.3. **Bidders are requested to study the scope of work before submitting their offer. Clarification, if any, required may be obtained from SM (Hull Fabrication) before quoting.**

2. विक्रेताओं के लिए पात्रता मानदंड / QUALIFICATION CRITERIA FOR VENDORS

The Bidder should qualify the following PQ Criteria:

2.1. GENERAL

2.1.1. Bidder shall be a single firm.

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- 2.1.2. Bidder shall not be under a declaration of ineligibility issued by Govt. of India/ State govt./Public Sector Undertakings etc. The bidder shall not have been debarred / black listed by CSL or by any of the Public Sector Undertaking or Government department etc. The declaration of eligibility at Annexure VI shall be submitted in this regard.
- 2.1.3. All the qualifying documents indicated in the tender shall be strictly in the name of bidding firm. Qualifying documents submitted in the name of any other than bidding firm will not be considered for bidding firm's qualification.

2.2. TECHNICAL EXPERIENCE

Technical pre-qualification requirement is given below:

- 2.2.1. The bidder shall have the experience for carrying out similar activities in Pre-heating and stress relieving (post weld heat treatment) for the past 5 years in Ships / offshore structures/ Heavy engineering/ Boiler and Pressure Vessels.
- 2.2.2. The contractors shall produce valid Authorization / Approval documents received from Factories and Boilers Department.
- 2.2.3. Documents on the availability of equipment, its operation methodology and ownership of the firm shall be submitted.
- 2.2.4. Contractor must have the capability to arrange equipments required for the simultaneous pre heating and stress relieving of two stern tube inside the block, as well as for additional work required at the same time.
- 2.2.5. Previous work orders and work completion certificate received for similar kind of work shall be submitted.
- 2.2.6. Contractor shall have adequate number of Heating Coils, Thermocouples and Temperature Recorder in order to execute the work.
- 2.2.7. Contractor shall have adequate number of competent personnel to meet the above scope of work. Statutory requirement on personnel competency for the heating job, if any, shall be complied.
- 2.2.8. Documents to prove credentials of the firm to undertake the subject work. eg: Details of available equipment's & facilities, Skilled / qualified Manpower, Work experience of similar job, etc. The firm has to submit the documents which validate the above mentioned Clause 2.2.1, 2.2.2 and 2.2.3 requirements. Work order for material supply will not be considered.
- 2.2.9. The similar works experience of parent company / subsidiary / Sister Company of the Bidder shall not be considered.

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2.2.10. CSL reserves the right to demand hardcopies of any of the above documents and any other related documents, if required. Bidders shall comply with the same.

2.3. FINANCIAL CAPABILITY

2.3.1. The bidder shall have an average annual financial turnover of **Rs.6 Lakhs** during the last three years ending on 31st March 2024.

2.3.2. The Bidder shall enclose with its Proposal, certificate issued by Chartered Accountant with their seal and signature, stating its turnover and profit during the past three years. Certificate shall be as per the format placed at Appendix – B.

2.4. OTHER CONDITIONS

2.4.1. The bidding firm shall have key personnel having single point of contact with contract details. He/she shall have adequate and specialized experience capable of discharging their responsibilities.

2.4.2. The bidding firm should have valid PAN and GSTIN and details of PAN / GST Registration Number and current valid Tax Clearance Certificate shall be submitted along with the offer.

2.4.3. Bidder should submit duly signed compliance matrix placed at Appendix – A for technical deviation/queries if any along with the offer.

2.4.4. If required, the documents / certificates submitted by bidder will be verified with source directly by CSL. Misleading or false representations in the forms, statements and attachments submitted in proof of eligibility requirements will result in summarily rejection / disqualification of the submitted offer at any point of time whatever may be the status of the process. Also, the firm will not be considered for further tendering for a period of three (3) years henceforth.

2.4.5. The Bidder should furnish the required work-specific information and satisfactory documentary evidence such as copy of work order / agreement and a certificate from the employer for satisfactory completion of work or any other relevant document indicating completion of work shall be submitted to CSL in support of its claim of experience.

2.4.6. **RIGHT TO VERIFICATION:** CSL has the right to verify the authenticity of bidder/ documents submitted by them and/or inspect the facilities if felt necessary. Based on this CSL reserves the right to accept and reject any and all bids, which in its opinion, appears to be most advantageous to CSL.

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3. प्रस्ताव की वैधता/VALIDITY OF OFFER

3.1. The offer shall be valid for acceptance for a period of 90 days from the date of opening of the Part-I Techno-Commercial Bid.

4. अनुबंध प्रदान करने का तरीका / METHOD OF AWARDING CONTRACT

4.1. Scope of work under this contract is heat treatment of 02 No.s of stern tube inside the block in Trailing Suction Hopper Dredger (TSHD) vessels (SH.037).

4.2. Contract will be concluded with the Bidder qualifying to techno-Commercial conditions and emerging as L1 bidder.

4.3. CSL reserves right to reduce/ increase the percentage work or cancel the order based on the performance of work undertaking firms at site.

4.4. CSL reserves the right to cancel the tender at any stage without assigning any reasons whatsoever based on CSL requirement. The decision of CSL regarding the same shall be final and conclusive.

5. कार्य की प्रगति तथा समापन की समय-सारणी/WORK PROGRESS AND SCHEDULE OF COMPLETION

5.1. Tentative Work period: March 2025 to April 2025.

5.2. It is estimated that approximate 20 days will be required for pre-heating of one stern tube inside the block and approximate three to five days for the post weld heat treatment process.

5.3. The firm should arrange sufficient number of operators in general working shifts from 07.00 hrs to 22.00 hrs without any break/interruption.

5.4. Yard has the right to change the schedules of the project to the interests of the company and the firm should be capable of adjusting the resources according to the instructions from the Yard contact person.

5.5. Detailed working schedule (Weekly/monthly) etc to be prepared and submitted to yard personnel. However, a detailed overall schedule, in a reasonable manner should be submitted prior to commencement of work.

6. कार्य प्रक्रिया / WORK PROCEDURE

6.1. Detailed for each category of works are mentioned in the Annexure III to the tender enquiry.

6.2. Necessary job instructions, drawings etc. for the work will be issued by CSL.

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- 6.3. The work needs to be commenced immediately on placement of the work order.
- 6.4. The contractor should be ready and capable to organize execution of the work at short notice as required by Cochin Shipyard Ltd
- 6.5. Contractor is to carry out the work as per the specifications / drawings supplied, and to the satisfaction of CSL.
- 6.6. Contractor should maintain the quality as per CSL Quality Standards, yard quality procedures. Inspection will be carried out during fabrication by CSL.
- 6.7. Contractor shall submit the weekly /monthly progress reports to CSL.

7. अनुबंध की वैधता / VALIDITY OF CONTRACT

- 7.1. Once the contract is awarded, the price offered and mutually agreed shall remain firm (Contract concluded price as per Annex-V) till completion of work and no escalation in rate shall be allowed by CSL on whatsoever reason thereafter.

8. निरीक्षण / INSPECTION

- 8.1. The complete work has to be carried out under the survey of ship classification society/ owner / CSL.

9. बोलियां जमा करने के लिए दिशानिर्देश / GUIDELINES FOR SUBMISSION OF BIDS

10.1. Technical Bid (Part -I)

- 10.1.1. The technical bid as specified in the scope of work (Annexure III) shall be submitted in E-mail.
- 10.1.2. **The following shall be submitted along with technical Bid, failing which the bid may be summarily rejected :-**
 - 10.1.2.1. Original tender document general Terms & conditions and technical specifications placed at Annexure I, II & III duly signed on all pages.
 - 10.1.2.2. The commercial Check List at Annexure IV filled up completely and duly signed
 - 10.1.2.3. Copy of un-priced bid format of each category of works at Annexure V.
 - 10.1.2.4. As per Govt. of India guidelines, Integrity pact (IP) should be signed for all contracts above Rs. One Crore. Accordingly IP should be signed and forwarded along with the offer.
 - 10.1.2.5. The declaration of eligibility at Annexure VI
 - 10.1.2.6. All other documents relevant to this tender.

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10.1.3. The non submission of duly filled commercial checklist will lead to the rejection of the bids.

10.2. Price Bid (Part-II)

10.2.1. The bid shall be comprehensive of the nature for *HEAT TREATMENT OF STERN TUBE IN TRAILING SUCTION HOPPER DREDGER (TSHD) SH.037* shall be inclusive for all the applicable charges envisaged under the scope of the contractor as specified in the technical specification Annexure III.

10.2.2. Bidders shall quote total amount in figures and in words. Corrections and additions if any must be attested/ duly signed by the bidder. In the case of error in multiplication/addition in amount calculated, the rate quoted will be considered as correct and the amount will be calculated accordingly. Conditional rebates & discounts, incomplete/ ambiguous offer will be rejected.

10.2.3. The price bid shall be all inclusive of scope of contractor on lump sum basis and any rates on variable basis will not be accepted within the price bid and thereafter throughout the period of the contract. Any variable rates if deemed inevitable and applicable only in special cases/situations (not in the normal course of execution of contract) will only be considered for mutual agreement.

10.2.4. Price Bid Format: The price bids shall be prepared as per the format given in Annexure V to the enquiry. The bidder must quote all line items as per price bid format any failure in this regard will lead to the rejection of bid.

10.2.5. Rates of individual line items for the overall L1 is considered as L1 rate of Price bid irrespective of lower rates in case of the line items within the part of other bidders.

10.2.6. Currency: The price bids shall be prepared in Indian National Rupees for all bidders.

10.2.7. As per tender condition, the price bid which were not opened will not be returned back at any reason.

10.2.8. The bids which are not conforming above requirements shall be summarily rejected without any further notice.

11. असामान्य रूप से कम उद्धृत दरें /ABNORMALLY LOW QUOTED RATES:

In case the price of L-1 Bidder is found to be unreasonably low and/ or bidder expresses desire to withdraw from the tender after opening of price bid, then tender will be cancelled and suitable penal action as per CSL procedure shall be taken against the firm.

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12. कर / TAXES

12.1. GST shall be applicable extra on the prescribed work. Bidders should indicate the applicable GST percentage and HSN code of the category in the offer. Bidders are also requested to furnish the following details in the invoice/Bill.

12.1.1. Applicable rate of GST/SAC Code

12.1.2. Firms GST Reg. NO

12.1.3. Service accounting code (SAC) as prescribed by statutory authorities.

12.1.4. GST Reg. No. of Cochin Shipyard Ltd (**32AAACC6905B1ZD**).

12.2. Any new tax/duty that may be made effective by the government for this work and paid by the contractor shall be reimbursed on production of documentary evidence.

13. भुगतान की शर्तें / PAYMENT TERMS

13.1. Payment will be made on monthly basis (calendar month) as 80% of actual completed work days on certification by the Officer-in-charge.

13.2. Balance 20% will be given on 100% completion of contract.

13.3. All claims for payment for the work/additional work shall be submitted by the sub-contractor within one month of completion of work.

13.4. An invoice upload facility by vendor is established through the Vendor Invoice Management (VIM) Portal is currently available for supply as well as service vendors including subcontractors so as to facilitate transparency and timely payment. The portal can be accessed at: <https://apps.cochinshipyard.in:446/vim/Home.jsp>

13.5. The same can also be accessed via Cochin Shipyard Website (<https://cochinshipyard.in>) as below;

13.6. Path: Cochin Shipyard Website --> Related Links --> Vendor Payment Info

13.7. All invoices above 10 Lakhs (including GST) are required to be digitally signed by the vendors and uploaded in VIM portal. The direct submission of invoices value above 10 Lakhs will not be accepted. Once the invoices are digitally signed and uploaded, there is no need to submit the hard copy for processing the payment.

13.8. Service Acknowledge Number (SAN) to be obtained from the Executing Officer at the time of certification of Work Completion Certificate (WCC) for the above process.

13.9. The invoice can be tracked using the generated Invoice Tracking Number till the payment.

13.10. Payment will be made by RTGS/NEFT to the account of contractor. The name of the bank, branch, A/C No., IFSC code & other particulars shall be furnished by the contractor in the proforma of CSL.

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14. बयाना राशि / EARNEST MONEY DEPOSIT (EMD)

14.1. Bidders shall furnish Earnest Money Deposit (EMD) equivalent to **Rs. 50,000** by way of RTGS/NEFT to the following account of Cochin Shipyard Ltd, Kochi

Bank	State Bank of India
IFSC	SBIN0004062
Account No.	10319928321 of Cochin Shipyard Ltd.

14.2. The bidder shall submit the proof of such transfer along with the submission of technical bid.

14.3. This shall be returned after finalization of contract and upon receipt of Security deposit in accordance with clause 15 below, with respect to successful bidders; With respect to unsuccessful bidders, the same shall be returned within 15 days of issuance of PO/Contract.

14.4. Bidders belonging to Micro and Small Enterprises (MSE's) category are exempt from furnishing EMD subject to the bidders producing valid UDYAM Certificate and shall be duly verified by CSL. Bidders who fail to submit UDYAM Certificate along with the Techno-Commercial Offer shall not be considered eligible for EMD exemption.

14.5. In case the offer validity is extended on mutual consensus, the validity of EMD shall be mutually extended, EMD may be forfeited in the following cases:

- Bidder withdraws, amends, impairs or derogates from the tender, agreed conditions in any respect within the period of validity of his offer.
- Non-acceptance of order.

15. प्रतिभूति जमा / SECURITY DEPOSIT/PBG

15.1. The successful tenderer shall remit 5% of the value of the contract as security deposit/PBG within 7 days of receipt of the work order. This amount has to be remitted by way of demand draft or bank guarantee (in approved proforma of CSL) from any of the nationalized banks/ Scheduled Indian Bank, valid till the satisfactory completion of the entire work. The Security Deposit/PBG will be released after satisfactory completion of the contract and nil liability to CSL. The Security Deposit/PBG will not bear any interest.

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16. परिसमापन क्षतिपूर्ति / LIQUIDATED DAMAGES

16.1. The progress of work will be monitored against the mutually agreed detailed schedule referred in clause. Liquidated damages for delays in execution of the work envisaged as per this order on account of the contractor, for any reason other than force majeure conditions, will be recovered at the rate of ½% (half percent) per week or part of the week of the total basic price of delayed work thereof, subject to a maximum of ten (10%) percent of the basic value of the delayed work.

17. आदेश रद्द करना और जोखिम अनुबंध / CANCELLATION OF ORDER AND RISK CONTRACTING

17.1. In the event the contractor fails to complete the work promptly and satisfactorily as per the terms of the order, and if the work is delayed beyond the agreed schedule, CSL, without prejudice, reserves the right to cancel the order and get the work done at contractor's cost and the expenditure so incurred including any damage or loss will be recovered from him and the Security Deposit furnished by him is liable to be forfeited either in whole or in part.

17.2. In addition to above tender holiday will be imposed against the firm as per discretion of CSL.

18. कार्मिकों की सुरक्षा और प्राथमिक चिकित्सा / SAFETY OF PERSONNEL AND FIRST AID

18.1. The contractor shall be entirely responsible for the safety of all the personnel employed by him on the work. In this regard, he may adopt all the required safety measures and strictly comply with the safety regulations in force.

18.2. The Contractor may arrange to suitably insure all his workmen/ other personnel in this regard. CSL will not be responsible for any injury or illness to the Contractor's workmen/other personnel during execution of the works due to whatsoever reasons.

18.3. In this regard, the Contractor will have to fully indemnify CSL against any claims made by his workmen/other personnel.

18.4. The Contractor shall provide and maintain so as to be readily accessible during all working hours, a first aid box with prescribed contents at every place where he employs contract labour for executing the works.

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19. **अप्रत्याशित घटना / FORCE MAJEURE**

- 19.1. Should failure in performance of any part of this contract arise from war, insurrection, restraint imposed by Government act or legislation of other statutory authority, from explosion, riot, legal lock-out, flood, fire, act of Govt. or any inevitable or unforeseen event beyond human control which will be construed as a reasonable ground for extension of time, CSL may allow such additional time as is mutually agreed to be justified by the circumstances of the case.
- 19.2. The occurrence / cessation of force majeure situation have to be informed with documentary evidence within 15 days from the date of occurrence / cessation.

20. **मध्यस्थता / ARBITRATION**

- 20.1. Any disputes arising during the currency of the contract shall, in the first instance be settled by mutual discussions and negotiations. The results of such resolution of dispute shall be incorporated as an amendment to the contract, failing which the parties can resort to arbitration.
- 20.2. If any dispute, disagreement or question arising out of or relating to or in consequence of the contract, or to its fulfillment, or the validity of enforcement thereof, cannot be settled mutually or the settlement of which is not herein Specifically provided for, then the dispute shall within thirty days from the date either party informs the other in writing that such disputes, disagreement exists, be referred to arbitration. The arbitrators shall be appointed and the arbitration proceedings shall be conducted in accordance with and subject to the Arbitration and Conciliation Act, 1996 (No. 26 of 1996) as amended from time to time and the decision of the Arbitrators shall be final and binding on the parties hereto. The arbitration will be done by a Board comprising one officer nominated by each party, and a mutually agreed Umpire. Each party shall bear its own cost of preparing and presenting its case. The cost of arbitration shall be shared equally by the parties unless the award provides otherwise. The enforcement of the award shall be governed by the rules and procedures in force in the State in which it is to be executed. Performance under this Contract shall however, continue during arbitration proceedings and no payment due or payable by the parties hereto shall be withheld unless any such payment is or forms a part of the subject matter of arbitration proceedings.
- 20.3. In case of disputes, the same will be subjected to the jurisdiction of courts at Ernakulam, Kerala, India only.

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21. क्षेत्राधिकार / JURISDICTION

21.1. All questions, disputes or differences arising under/out of or in connection with this contract shall be subject to the jurisdiction of the Courts in Cochin.

22. श्रम कानून और विनियम / LABOUR LAWS AND REGULATIONS

22.1. The Contractor shall undertake and execute the work with contract Labour only after taking license from the appropriate authority under the Contract Labour (Regulation & Abolition) Act 1970.

22.2. The Contractor shall observe and comply with the provisions of all labour and industrial laws and enactments and shall comply with and implement the provisions of the Factories Act, 1948, `Employees Provident Funds & Miscellaneous Provisions Act, 1952, Employees State Insurance Act, Payment of Gratuity Act, minimum Wages Act, Payment of Bonus Act, Contract Labour (Regulation and Abolition) Act and all other enactments as are applicable to him and his workmen employed by him. The Contractor shall inform CSL his license number from the Central Labour Commissioner.

22.3. All contract workmen, except those exempted under the respective Acts, shall necessarily be insured under the ESI scheme and be made members of the EPF Scheme from the day of their engagement as contract workmen in the Company. All such insured contract workmen should carry with them their ESI Identity Card for verification by the authorities. No contract workmen without a valid ESI Identity Card for verification by the authorities will be permitted to work in the company.

22.4. The Contractor shall submit the Compliance Certificate by means of uploading relevant documents such as Electronic Challan cum Receipt, Challans etc. as having remitted the contributions towards EPF/ESI in respect of their workers, in the goggle form provided for the purpose, every month so as to reach Welfare Section on or before 22nd of every month. Google form link: <https://forms.gle/3GidCgsP4jHhXDJt9>

22.5. The Contractor shall submit the Labour Reports>Returns as required by the Company from time to time in respect of their workmen in standard format to the concerned contracting officer so as to enable the same to reach Personnel Department by the 5th of every month. Delayed submission of the same shall attract penal interest /damages at the rate as levied by the respective authorities under the relevant Acts.

22.6. The Contractor shall maintain the records viz. Muster Roll, Acquaintance Roll with full details, Account books etc., in original. These are required for inspection by the concerned authorities under each scheme.

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- 22.7. If the Contractor fails to pay any contributions, charges or other amounts payable under any of the aforementioned provisions of law, CSL shall deduct or adjust amounts equivalent to such contribution, charges or amounts from amount payable to him by CSL, including any deposit or amounts payable against bills and make payments on his account to the appropriate authority. He shall not be entitled to question or challenge such deductions, adjustments or payment made by CSL.
- 22.8. Any other amount payable under any law or in respect of any person employed by the Contractor, if not paid by him, shall be deducted or adjusted by CSL out of any amount payable to the Contractor including any Security Receipt and paid ever or withheld for payment by CSL.
- 22.9. The Contractor shall be fully responsible for the conduct and discipline of the workmen employed by him in the Company premises. If such workmen commit any misconduct or criminal act inside the Company, the Contractor shall take appropriate action against such workmen. The contractor shall abide by the instructions/ guidelines issued by the Company for maintenance of discipline and good conduct among the workmen employed by him.
- 22.10. All person who are engaged for various works in CSL either directly or through contractors, should produce the following documents prior to issuing their entry passes:
- 22.11. Passport/attested copy of passport with photo and address particulars. OR
- 22.12. Police clearance certificate with photo and address particulars. (Police clearance certificate to the effect that the concerned person is staying in the area of jurisdiction of the certificate issuing Police Station and that the person is not involved in any criminal offences as per the records available therein.)
- 22.13. Application and Declaration for enrolling under Employees Provident Fund and ESI Scheme - 3 individual passport size photographs and two copies of family photographs of the members.
- 22.14. **Contractors are requested to familiarize themselves with the labour rules & regulations prevailing in CSL including the labour wage pattern of contract labour as per the settlement between the trade unions & contractors.**

23. आईएमएस दिशानिर्देश /IMS GUIDELINES

- 23.1. CSL has implemented an Integrated Management System (IMS) consisting of Environmental Management system (EMS), Occupational Health and Safety Management System (OHSMS) and the Quality Management System (QMS) within the

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yard. As part of IMS, subcontractors shall comply with the following measures related to the Quality, Health, and Safety & Environment (QHSE) policy of CSL.

- 22.1.1. Meeting or exceeding customer requirements.
- 22.1.2. Assuring quality of the products and service.
- 22.1.3. Preventing occupational ill health & injuries.
- 22.1.4. Ensuring safe work sites.
- 22.1.5. Conserving natural resources.
- 22.1.6. Preventing / minimizing air, water & land pollution.
- 22.1.7. Handling and disposal of Hazardous wastes safely.
- 22.1.8. Complying with statutory & regulatory and other requirements.
- 22.1.9. Developing skills and motivating employees.
- 23.2. Occupational Health, safety & Environmental requirements of CSL shall also include the following.
- 23.3. The contractor (or a sub-contractor performing work on behalf of the contractor) is deemed to comply with the Occupational health, safety and environmental policy of the company and also to all operational controls/standard operating procedures and shall undertake the work in total compliance with the requirements of the established Integrated Management System (IMS) of the company.
- 23.4. The Contractor shall undertake the work in total compliance with all applicable legal/statutory requirements related to occupational health, safety and environment effective in the state of Kerala.
- 23.5. It is the sole responsibility of the contractor to assure that any sub-contractor/s who shall perform works in company lands/facilities/worksites on behalf of the contractor, is also following all requirements related to the Integrated Management System of the company and the health/safety/environmental Rules effective in the state.
- 23.6. The contractor shall provide/implement and operate/practice all occupational health, safety and environmental management measures/facilities, for their period of contract, in their activities/at their work sites, which shall be required according to the IMS of the company or that required by the health/safety/environmental Rules established and effective in the state, at their own cost.
- 23.7. If any contractor failed to comply with or violated any clauses/requirements of occupational health, safety and environmental Rules effective in the state, in their activities or at work sites and the same shall be exposed to the government or any competent authorities upon inspections, the contractor shall be solely responsible for all

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liabilities caused by his/her action and shall be responsible for paying the penalty and taking stipulated corrective actions insisted by the authorities within the specified time, at their own cost. Any liability to the company in this regard needs to be compensated by the contractor.

23.8. Upon completion of the work, contractor shall clear the area and shall not leave any Occupational health/safety/environmental liabilities to the company, from their activities at the worksites.

23.9. Any clarification related to IMS requirements of the yard, may be obtained by the contractor from the DGM (Hull) or the authorized representative of the contract, prior to the commencement of work.

24. बिजली नियम और विनियमन / ELECTRICITY RULES AND REGULATION

24.1. The contractor shall adhere to the various rules in respect of electrical installation as per the Indian Electricity Rules and Regulations and Electrical Inspectorate Standards in order to make sure that men and materials are safe from hazards.

25. गोपनीयता खंड / SECRECY CLAUSE

25.1. The CONTRACTOR shall be responsible to ensure that all persons employed by them in the execution of any work in connection with this contract are aware of the provisions of the official secrets act 1923 and to comply with the same. The CONTRACTOR shall also ensure secrecy of design, construction, equipment and completion of the vessel. Any information provided to you under this contract is to be treated as strictly confidential and is not to be disclosed to any person or persons not concerned therewith.

25.2. All documents under this Contract transferred between the parties shall be treated as UNCLASSIFIED unless explicitly marked.

25.3. The CONTRACTOR shall ensure that their organization, suppliers/ installation agency/test and trials teams etc. shall not communicate for use in advertising, publicity, sales release or in any other medium, system details, photographs and reproduction of equipment and their fitment on board.

25.4. SECRECY, Titles: Maps, layouts and photographs of the unit/plant including its surrounding regions showing vital installation for national security of CSL country shall not be published or disclosed to the third parties or taken out of the country without prior written approval of the CSL and upon execution of confidentiality agreements satisfactory to the CSL with such third parties prior to disclosure.

**26. HEALTH, SAFETY & ENVIRONMENT CONTRACT GUIDELINES FOR OEMS
/TURNKEY JOBS / SUB CONTRACT WORKS INSIDE CSL**

INTRODUCTION

- 26.1. CSL is the largest public sector shipyard in India in terms of dock capacity, and caters to clients engaged in the defence sector in India and clients engaged in the commercial sector worldwide.
- 26.2. CSL is committed to provide safe and healthy work environment for the prevention of work- related injury and ill health by following the best practices in safety. CSL is certified Occupational Health and Safety management System and Environmental Management system under ISO standards/international standard.
- 26.3. Many of the works of CSL at various sites are executed by the sub-contractors. During these works, sub-contractors personnel are likely to be exposed to different types of hazards. Similarly unsafe acts of contractor’s personnel may create hazards for CSL staff or workmen of other contractors working at the site. Such unsafe acts may also pose danger to the existing installations and even to members of public.
- 26.4. CSL ensures that the requirements of its HSE Management System are conveyed by contractors and their workers. This guide is prepared to facilitate safe working during execution of contract works. The General guide lines and HSE requirements are given below for compliance in CSL.

GENERAL GUIDELINES

- 26.5. OEMs/Turnkey jobs /Contractors are selected to work inside the CSL based on their track record.
- 26.6. Along with the contract order/Registration, a copy of the HSE Safety Handbook (CSL/QMS/S&F/SOP 02 – Refer CSL Website) of CSL is given to all contractors. The details of all HSE requirements to be followed in CSL for the various types of work are detailed in the hand book. The OEMs/Turnkey jobs /Contractors shall go through all the details and strictly follow the relevant HSE guidelines for their work. In case of any doubt the same shall be clarified from Chief Safety Officer (CSO). Being ignorant of these HSE requirements will not be treated as an excuse for any HSE violations during course of work.
- 26.7. OEMs/Turnkey jobs /Contractors workmen are given a multilingual HSE induction and Emergency Response training. The individual passes for contractors and their workers

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are issued only after successful completion of this training. The passes are revalidated every year after successful completion of refresher training. Training requirements of other roles of the subcontractor's staff shall be complied as per the CSL requirements time to time.

- 26.8. Before start of any work, the CSL officer in charge explains the scope of work and the safety precautions, hazards, PPE usage as per PPE matrix of CSL, Work Instructions, SOPs, Emergency responses to the contractor and his workers. Only trained worker with necessary skills are allowed to work as per the requirement. Necessary PPEs for the work are to be arranged by the contractor.
- 26.9. Workmen shall have Cotton coverall with identifiable logo on the dress. Supervisors, fire watch man if required, safety staff and other workforce shall be deployed as per CSL guide lines.
- 26.10. The site work supervisor of the OEMs/Turnkey jobs /Contractors shall be ensured that works are being carried out by CSL HSE requirements on daily basis and till the completion of works. The safe start and safe end requirements shall be verified by the site work supervisor on daily basis.
- 26.11. OEMs/Turnkey jobs /Contractors HSE performance will be evaluated on HSE matters as per the CSL policies time to time.
- 26.12. During the course of work if any HSE violation is noticed the same is dealt as per the Rewards and Reprimand (R&R) Policy of CSL.
- 26.13. HSE Plan to be submitted to S&F Dept while commencing the work in CSL and shall be resubmitted in every year.

HSE REQUIREMENTS

- 26.14. The OEMs/Turnkey jobs /Contractors shall take all safety precautions during the execution of awarded work and shall maintain and leave the site safe at all times. At the end of each working day and at all times when the work is temporarily suspended, he shall ensure that all materials, equipment and facilities will not, cause damage to existing property, personal injury or interfere with the other works of the project or Station.
- 26.15. The OEMs/Turnkey jobs /Contractors shall provide and maintain all type of lights, guards, fencing, warning signs, caution boards and other safety measures for vigilance as and where necessary or as required by the CSL officer-in-charge or Safety staff. The caution boards shall also have appropriate symbols.
- 26.16. Where Permit to work (PTW) is required, the work has not started without obtaining the necessary permit and the PTW requirements are followed strictly throughout the work.

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- 26.17. For Project specific or non-routine work on the existing installations, separate Job Safety Assessment (JSA) is to be prepared by the contractor, cleared by the Dept in charge and approval obtained from CSO before start of work. The work shall be executed through Notification Control Procedure (NCS).
- 26.18. A separate HSE plan will be required for the new projects in the yard or any turnkey projects. It shall be in line with CSL HSE requirements and same shall be routed through respective S&F dept and approved by respective HOD.
- 26.19. OEMs/Turnkey jobs /Contractors shall hold toolbox talks with his workers on daily basis to convey matters regarding the Safety aspects of the work.
- 26.20. The OEMs/Turnkey jobs /Contractors shall plan his operations so as to avoid interference with other Departmental works and other Sub-Contractors at the site. In case of any interference, requires, coordination shall be sought by the contractor from the Department for safe and smooth execution of work. This shall be done through CSL executing officer.
- 26.21. The OEMs/Turnkey jobs /Contractors shall at all times keep their work spot, site office and surroundings clean and tidy from rubbish, scrap, surplus materials and unwanted tools and equipment. Welding cables, hoses and electrical cables shall be so routed as to allow safe way to all concerned.
- 26.22. All waste generated in course of the work shall be segregated as per the yard requirements and shall be disposed at the respective collection pallets / points of the work areas as the case may be. Any kind of pollution made by the subcontractor shall attract the reprimand proceedings.
- 26.23. All necessary precautions shall be taken to prevent outbreak of fires at the work site. Adequate provisions shall be made to prevent the possibility of fires and ensure the availability of fire extinguishers at site.
- 26.24. The OEMs/Turnkey jobs /Contractors shall be held responsible for non-compliance of any of the safety measures and delays, implications, injuries, fatalities and compensation arising out of such situations of incidents including statutory obligations.

27. सामान्य शर्तें / GENERAL CONDITIONS

- 27.1. Quality of workmanship shall conform to the specification/ standards laid down by CSL
- 27.2. CSL reserves the right to award the work to more than one contractor or to take over partially or fully the work depending upon the scheduled requirements.
- 27.3. Compliance of all statutory safety requirements and other safety rules stipulated by CSL and other applicable statutory bodies shall be the responsibility of the Contractor while

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working at CSL premises. The Contractor should ensure that their workmen and staff are adequately covered under Insurance.

- 27.4. Damages caused to the Shipyard properties/tools/accessories should be rectified by the Contractor at his cost or proportional recoveries will be made from the contractor while passing their bills for payment.
- 27.5. Cochin Shipyard Limited reserves the right to terminate the Contract at short notice in case the Contractor's performance is found not satisfactory with regard to progress of work, quality, time factor, labour dispute with their workers, poor safety records etc., and other contractual obligations. No claim whatsoever will be entertained by Cochin Shipyard Limited on this account.
- 27.6. The Contractor shall have to engage men on round the clock basis and also on Sundays and holidays, if required. Work has to be completed to the satisfaction of Cochin Shipyard representative deputed for the job. The job should be completed at the time specified by the representative deputed for the job for each stage of work.
- 27.7. The Contractor shall indemnify CSL and CSL's personnel against any claims arising out of accidents or injuries to workmen or other persons or damage to other property which may arise during the execution of the contract or from breach of any Law or Regulation prior to delivery and acceptance of the items at CSL.
- 27.8. It is also to be understood by the Contractor that Cochin Shipyard Limited does not bind itself to give the Contractor any regular or specific quantity or area of work and it shall be done at the sole discretion of CSL depending on the prevailing site conditions and other limiting factors and no claim on this account from the contractor shall be entertained.
- 27.9. The Contractor shall also be governed by the General Conditions of Contract of CSL, General Safety Rules and other relevant labour laws.
- 27.10. The contractor shall arrange to collect and clean up every day all waste, scraps; debris, etc. generated by the work men while working on-board the vessel and other locations and dispose the same suitably at his cost to the full satisfaction of CSL. In case any failure on his part to comply with this requirement, CSL will arrange the required cleaning entirely at the contractors cost.
- 27.11. The upper age limit of all workers and supervisors employed by the contractor and those contractors who do or supervise the job themselves shall be as per the prevailing rules of CSL.
- 27.12. Chief General Manager (SB) or his authorized representative will be the Officer-in-charge

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of this Contract.


- 27.13. Withdrawal of the quotation after it is accepted or failure to make contract execution within the stipulated completion period will entail cancellation of the order and forfeiture of EMD/ Security Deposit, if any/ and or risk purchase.
- 27.14. Subcontracting to other vendors shall be only after written intimation and approval of competent CSL authorities. Vendor shall not delegate or subcontract any of its obligations under the agreement without CSL's written consent. Vendor will remain liable for all subcontracted obligations and all acts or omissions of its subcontractors.
- 27.15. The procedures of work, standard operating procedures of work including documents like welding procedure specifications developed by CSL are intellectual property of CSL. Vendors shall not use or copy the procedure in any format without the written consent of competent authorities of CSL.
- 27.16. Vendor shall return the CSL resources to CSL immediately after provision of all deliverables and services or any termination of the agreement.
- 27.17. Conditional discounts, if any, will not be reckoned for tender evaluation/comparison purposes. However the same will be considered at the time of placement of purchase order if the firm turns out to be lowest bidder.

28. अधिलेखन और सुधार / OVERWRITING & CORRECTIONS

- 28.1. Tenders shall be free from overwriting or erasures. Corrections and additions, if any, shall be duly attested and a separate list of such corrections shall be attached with the offer.)

All terms and conditions, other than those mentioned above, contained in the Enquiry specification and drawings (Annexure I), Cochin Shipyard Ltd - General Terms and conditions (Annexure II) and other annexure pertaining to this tender shall also be attested by the bidder as a token of acceptance.

- 28.2. CSL reserves the right to reject any or all bids without assigning any reasons whatsoever and or based on the past unsatisfactory performance by the bidders at CSL/other PSE's/Government Departments. After issuing the work order, CSL reserves the right to terminate the contractor if the performance of the contractor is not found satisfactory. The decision of CSL regarding the same shall be final and conclusive.


कृते उप महाप्रबंधक / For Deputy General Manager
आउटसोर्सिंग विभाग / Outsourcing Department

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ANNEXURE-II

कोचीन शिपयार्ड लिमिटेड / COCHIN SHIPYARD LIMITED
कोच्ची / KOCHI-682015

आउटसोर्सिंग विभाग / OUTSOURCING DEPARTMENT

सामान्य शर्तें / GENERAL CONDITIONS

1. The complete work to be carried out with the highest degree of workmanship under the inspection of CSL, Classification Society (when specifically indicated in the technical specifications), Ship owner, or any other agency nominated by the Shipyard.
2. Any minor modifications, resulting from the change in statutory regulations prevailing at the time of final inspection of work by Classification Society, to be carried out by the Contractor free of cost. In case of rework/modification/additional work, written consent is to be obtained from the Officer-in-charge before commencement of the work.
3. Contractor shall carry out the complete work in accordance with Shipyard's approved drawings. Any minor modifications from drawing or any other work or supply of material, which is not specified hereunder, but is considered incidental and essential for the successful completion of the job shall be carried out by the Contractor without any additional charge.
4. Contractor shall execute, during or after completion of the work, any minor job connected with the work, should it be considered necessary by Shipyard and/or Classification Society
5. The contractor shall be responsible for any damage caused to the material supplied by CSL. Compensation with penalty for damage or loss of the item will be recovered from the Contractor, in the event of loss or damage.
6. Contractors are required to work round the clock / Sundays/ holidays as per the requirement of concerned department in order to complete the work in time.
7. Any particulars/literature/information/certificates required by the Shipyard in connection with the work is to be forwarded free of cost.
8. All correspondence with the Shipyard to be in English language. All documents and plans to be in English language and in metric units.


कृते उप महाप्रबंधक / For Deputy General Manager
आउटसोर्सिंग विभाग / Outsourcing Department

ANNEXURE III

TECHNICAL SPECIFICATION

HEAT TREATMENT OF STERN TUBE IN TRAILING SUCTION HOPPER DREDGER (TSHD) SH.037

1. INTRODUCTION

The work includes Heat Treatment of 02 No.s of stern tubes (inside the block) which is to be integrated into the hull structure by welding, during the time of welding the stern tube needs to be heated to a temperature of 100-150 degree celsius, followed by PWHT (Post Weld Heat treatment) by raising to a temperature of 50-100 degree celcius/hour to a temperature of 580 degree celcius (max) by holding for one hour and reducing the same at a rate of 50-100 degree celcius/hour in Trailing Suction Hopper Dredger (TSHD) SH.037 to the entire satisfaction of CSL / Owner / Class surveyor. The work is to be carried out In-situ area (Erection stage or during block stage) allotted to the contractor (s) inside CSL premises.

2. VESSEL PARTICULARS

Length overall	127 M
Length b/w perpendiculars	117 M
Breadth, moulded	28.4 M
Depth, moulded	10.4 M

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3. TECHNICAL SPECIFICATION

SL. NO.	DESCRIPTION	DETAILS
1	Material for welding	Hull Plate:- EH 36/AH 36 Stern tube:- Forged Steel CN 22+Ceq
2	Thickness of weld joint	Floors - 20 mm (Fillet joint with stern tube) Plate thickness at Butt Joint plate with Stern tube plate - 40 mm (Plate in stern tube is 120mm chamfered to 40mm).
3	Approximate Weld Length	150 Meters for one stern boss (Both inside and Outside) (approx. dia – 0.875 M). Total 02 stern Boss Concurrent welding of two stern boss will be done.
4	Temperature of Pre-heating & Interpass temperature	100 °C and interpass temperature 150 °C
5	Post weld heat Treatment	580 Degree maximum (raising and lowering by 50-100 degree)
6	Type of heating	Electrical coil heating
7	Location of Work	CSL Assembly shop/In-front of Assembly shop at Cochin, Kerala

4. SCOPE OF WORK

- The contractor shall arrange the required quantity of heating coil, temperature recorder, Thermocouples, and insulation-material required for the work. The contractor shall have some buffer quantity of above items to meet contingency management. Simultaneous heat treatment of minimum two no. of stern tube to be catered to meet the schedule.
- The contractor shall arrange power supply system, monitors for smooth functioning of the heating process round the clock.

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- c) To & fro transportation of equipment / machinery , tools, gauges and other accessories required for the work from upcountry destination to Cochin Shipyard Limited.
- d) Working hours shall be from 07:00 Hrs to 22:00 Hrs in a day. The firm should arrange sufficient number of operators in shifts so as to provide continuous service in specified time period without any break/interruption.
- e) Contractor may be need to carry out preheating of 02 stern tube inside the block concurrently, if necessary.
- f) Installation and setting up of equipment / machinery at worksite in CSL.
- g) Deputation of competent Supervisors and technicians for execution of the work.
- h) Single point contact to discuss the progress and other related matters.
- i) Pre-heating and post weld heat treatment (Stress Relieving) of the weld joints to the satisfaction of CSL engineers / Class Surveyors.
- j) The weld joint and adjacent area to be covered with glass wool to avoid scaling and heat loss.
- k) Connecting the thermocouples to the temperature recorder.
- l) Recording the reading pertaining to the rate of heating, rate of cooling, holding temperature etc. and preparation and submission of detailed chart.
- m) *Time vs Temperature* chart shall be prepared and submitted by the contractor for verification. This shall include the loading temperature, rate of heating, soaking (holding) temperature, holding time and unloading temperature.
- n) The temperature recorder, heating-coil, thermocouples etc. shall have valid calibration certificate.
- o) All consumables, tools and accessories required for the work shall be under the scope of the contractor including insulation for covering the coil.
- p) All items required for successful completion of the work other than indicated in the scope of CSL are to be arranged / procured by the contractor.
- q) The contractor should be ready and capable to organize execution of the work at short notice as required by Cochin Shipyard Limited.
- r) The work has to be done as instructed by CSL officer in charge.
- s) The contractor shall engage men round the clock basis and also on Sundays and holidays if the situation warrant.
- t) The contractor has to ensure smooth, as per the instructions from the engineers of CSL.
- u) The contractor shall strictly follow CSL safety rules / regulations at site and shall be entirely responsible for the safety of personnel engaged by him on the work.

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- v) The contractor shall arrange all MCB, ELCB of required amps for their equipment as per the CSL safety rules.
- w) Muster roll shall be kept by the contractor duly signed by the executing officer.
- x) In case of PWHT, technicians must be deployed round the clock to monitor the heating process as per requirement.
- y) The contractor shall dispose all waste material in proper place and maintain hygiene in work place.
- z) Arrangement of work permits in accordance with the CSL safety procedures shall be the scope of firm.
- aa) Workers health and safety PPE in accordance with CSL HSE standards shall be the scope of firm.

5. INSPECTION

- a) The Vessel shall be constructed in accordance with the rules of dual class under Classification Societies of Lloyds' Register of Shipping (LR) and Indian Register of Shipping (IRS)
- b) The complete work has to be carried out under the survey of CSL, LR, IRS and Owners. The works are to be inspected and approved by CSL initially and thereafter presented to LR, IRS and Owners for their survey and approval. IHC will be the technical consultant to the project, who will guide in all the phases of construction also. They will depute a specialist for overseeing the activity.

6. SCOPE OF CSL

- a) Fit-up and welding of stern tube outside the block and inside the block and subsequent NDT.
- b) Electricity and water will be provided at predetermined locations free of cost. (Connection from Switch board and collecting of water from the designated location to be carried by the contractor.)
- c) Service of cranes and forklifts for loading and unloading of items within CSL premises.

7. SAFETY/STATUTORY RESPONSIBILITY

- a) The contractor shall be entirely responsible for the safety of all the personnel employed by him on the work. In this regard, he should adopt all the required safety measure and

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strictly comply with the safety regulations in force. A copy of CSL's "Safety Rules for Contractors (Revised)" is available with Outsourcing Department for reference.

- b) The Contractor should arrange to suitably insure all his workmen/other personnel in this regard. CSL will not be responsible for any injury or illness to the Contractor's workmen/other personnel during execution of the works due to whatsoever reasons.
- c) In this regard, the Contractor will have to fully indemnify CSL against any claims made by his workmen/other personnel.
- d) The Contractor shall provide and maintain so as to be readily accessible during all working hours, a first aid box with prescribed contents at every place where he employs contract labour for executing the works.



कृते उप महाप्रबंधक / For Deputy General Manager
आउटसोर्सिंग विभाग / Outsourcing Department

ANNEXURE- IV

तकनीकी वाणिज्यिक जांच सूची / TECHNO COMMERCIAL CHECK LIST

(To be submitted by the bidder)

TENDER NO. SB-OSD/TSHD/932/2025 Dtd: 07.03.2025

(Bidders may confirm acceptance of the Tender Conditions/deviations if any to be specified)

SL. No.	Tender Enquiry Requirements	Confirmation from bidder (<u>strike off whichever is not applicable</u>)	Specific comments /Remarks
1	Scope of work as per Technical Specification/Drawings/ General Terms & conditions (Annexure III)	Agreed as per tender /Do not agree	
2	Whether technical bid & two price bids are submitted in separate PDFs?	Yes / No	
3	Schedule of work as specified in technical specification/ price bid of this tender is acceptable	Yes/ No	
4	Submission of Information/Documents with offer	Submitted/Not submitted	
5	Submission of MSME and NSIC registration document with offer	Submitted/Not submitted	
a	Specify the current status of the firm	MSME/MSE/Startup	
6	Offer Validity (date)	90days - Agreed as per tender/Do not agree	
7	Completion period as mentioned in the tender enquiry is acceptable	Yes/ No	
8	Taxes & Duties	Specified/included in Price	
9	Payment terms - Confirm	Confirm	
a	Any others (Specify details)		
10	Price shall remain firm and fixed and No Escalation in prices after awarding of contract	Agreed as per tender/Do not agree	

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11	Security Deposit or Performance Guarantee Clause	Agreed as per tender/Do not agree	
12	Termination of contract/risk purchase as per relevant clause in the terms & conditions of tender enquiry is acceptable	Yes / No	
13	Force Majeure	Agreed as per tender/Do not agree	
14	Liquidated damages and cancellation of contract	Agreed as per tender/Do not agree	
15	Arbitration & Jurisdiction clauses	Agreed as per tender/Do not agree	
16	Confirm all other terms and conditions of our enquiry are acceptable.	Confirmed/Not confirmed	
17	Confirm, un-priced price bid (price bid without price) is submitted with Part – I bid	Confirmed/Not confirmed	
18	Mode of submission of tender	Direct / Email	
19	Fully aware about the safety, general rules, regulations, standards, validity of offers and price, entry pass eligibilities.	Yes / No	
20	Is your firm registered under TReDS	Yes/No	
21	Is your firm registered as vendor in CSL	Yes/No	
22	Annual turnover requirement, during last 3 years, ending 31 st March of the previous financial year	Agreed as per tender/Do not agree	
23	Do your firm have valid registration under statutory schemes such as ESI / EPF	Yes/No	
24	Deviations from Tender conditions	No Deviations /Deviations are specified	

हस्ताक्षर / Signature:

ठेकेदार का पता / Address of the Contractor

मुहर / Seal:

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SL. No	Description of Work	Approx. No. of Days (A)	Unit rate per Day (INR) (B)	Total amount (INR) (C) = A*B
1	Pre-heating of One stern tube inside the block as per drawing/scope of work at Annex-III	20		
2	Lump Sum Rate for Post Weld Heat Treatment of One Stern Tube inside the Block			
3	SUBTOTAL AMOUNT FOR ONE STERN TUBE (SL No. 1 + SL No. 2)			
4	GST% HSN CODE			
5	GRAND TOTAL AMOUNT FOR 02 STERN TUBE 2 * (SL No. 3 + SL No. 4)			

Grand Total amount (in words)Rupees.....
.....
.....



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NOTE:

- A. L1 will be determined based on Sub total amount (**SL. No. 3**) excluding GST.
- B. GST as per the prevailing rate will be paid. Bidder should specify HSN also.
- C. L1 declaration will be based on the price bid verification by CSL finance department as per the calculation specified.
- D. Rates quoted shall be inclusive of charges for each pre heating equipments, transportation, installation & de-installation charges, labour charges for pre heating and idle charge as specified in the Annex-III of scope of work.
- E. Days mentioned in the price format is only indicative. Downward or upward variation of days shall be anticipated. Payment will be made as per the actual days of work.

Signature of Contractor/authorized signature
of firm or agency:

Name of contractor or authorized signatory of
firm/agency:

Designation:

Address:

Contact No:

ANNEXURE-VI

DECLARATION

I hereby declare that the details furnished in this tender proposal are true and correct to the best of my knowledge and belief. In case any of the information is found to be false or untrue or misleading or misrepresenting, I am aware that I will be held liable for it and CSL is free to take any legal / commercial action not limited to barring / blacklisting.

We hereby declare that we are not under a declaration of ineligibility / blacklisting /debaring/ tender holiday from doing business issued by Govt. of India / State govt. / Public Sector Undertakings etc.

Yours faithfully,

(Signature & Seal of Authorised Signatory)

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APPENDIX- A

COMPLIANCE MATRIX

<u>Clause No.</u>	<u>Compliance/ Deviation</u>

Notes:

1. If offer is not fully conforming to the requirements given in any clause of this specification, the deviation shall be stated in detail against the particular clause in the Compliance matrix.

APPENDIX - B

FORMAT FOR FINANCIAL CAPABILITY

SL. No.	Last three Financial Year	Annual Turnover	Profit after Tax (PAT)
1	Year 2021-22		
2	Year 2022-23		
3	Year 2023-24		

To be signed by the Authorized Signatory of the Applicant with Name, Designation, seal and date.

Certificate from Chartered Accountant:

This is to certify that _____ (name of the Firm) has received the payments shown above against the respective years and as computed.

Name of the Authorized Signatory representing Auditing firm:

Designation:

Name of firm (Chartered Accountant):

Signature of the Authorized Signatory:

Seal of Audit firm

APPENDIX-C

PERFORMANCE EVALUATION FORM

Parameters	Evaluation Grade Points Awarded (Grade Points X Weightage)					
	Grade	Excellent	Good	Average	Bad	Very Poor
	Weightage	5	4	3	2	1
Timely Completion as per Project schedule	10					
Work Planning & Coordination	2					
House Keeping and HSE	2					
Responsiveness to critical and complex works	2					
Overall Quality Management	2					
Integrity and Professionalism	2					
Total Grade Points (<i>sum of points in each grade</i>)	20					
Grand total of grade points awarded (Max 100)						

Points to be considered during evaluation

Timely Completion as per Project schedule	Completion of work within stipulated time, including class surveys & till submission of proper quotation. (No Reworks/Survey failures)
Work Planning & Co-ordination	Planning of (material, labour & machinery) for smooth execution of work, coordination with multiple agencies/stakeholders, Pro-active approach in avoiding hindrance of work, Supervisory skills, communication etc.
Responsiveness to critical and complex works	Willingness to execute complex works understanding the importance of the work for CSL, deployment of adequate workers in time & round the clock in critical tasks.
Overall Quality Management	Quality of Work, No of QC/Class survey points, Re-works, RT/Survey Failures, quality of manpower, supervisors etc. to be considered

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House Keeping and HSE	Adherence to CSL HSE policies and instructions especially based on Number of Unsafe acts/ near misses ,use of PPEs, commitment & continuing practices for good housekeeping at site including waste management, daily tool box meetings at site.
Integrity and Professionalism	Responsiveness & commitment to work, uniforms to workers, appropriate & polite behaviour at site, ethics in preparation of quotations, corrections in quotation, proper documentation.
Signature (CSL Officer in-Charge)	
Name & Design	

	Company name	Royal IHC		Initiated by	H.P. de Joode	
	WPS no.	491H	Rev	0	Date	06-Oct-23
	SupportingPQR	491				

IHC project no.	63552	Client + ordern	
Welding Process(es)	136	Project name	Stern tubes - Beagle 12
Process type	Semi Automatic	Welding code	ASME IX, Lloyds Rules

WELDING POSITION	
Weld position	PB
Weld progression	None
Position of fillet weld	None
Remarks	None

PREHEAT	
Temperature (min.)	100°C
Max. interpass temp.	250°C
Preheat maintenance	Propane flare
Remarks	Local preheat

JOINT DETAILS		
	Minimum (mm)	Maximum (mm)
Thickness 1	60	60
Thickness 2	20	20
Diameter 1	203	323
Diameter 2	plate	plate
Joint type	Filletweld, single sided, single layer	
Root opening	None	
Joint angle 1	None	
Joint angle 2	None	
Backing	No	
Backing mat.	None	

Remarks 1 Fillet weld inside. A 5

POSTWELD HEATTREATMENT	
Temperature	580°C
Holding time	1 hour per inch
Heating rate	100°C / hour
Cooling rate	100°C / hour
Remarks	

SHIELDING GAS		
M21: Ar.-CO2	none	None
80% Ar, 20% CO2	not aplicable	not aplicable
Flow rate	15 / 25 l/min	
Gas backing	None	
Trailing gas	None	
Remarks	None	

Tungsten electrode size	None
Mode of transfer for GMAW	None
Electrode wire feed speed range	None

String or weave bead	String
Oscillation	None
Contact tube to work distance	15 - 25 mm
Multiple or single pass (per side)	Multiple
Multiple or single electrodes	Single
Travel speed	See below
Peening	None
Remarks	None

BASE MATERIAL					
Material designation or steel type	P-No.	S-No.	Chemical Analysis	Mechanical Properties	
Base Material 1	C22 (Werkstoff nr. 1.0402)	1	None	0.17-0.24% C, 0.4-0.7% Mn, <0.4% Si, Cr+Mo+Ni <0.63	NA
Base Material 2	S355 J2+N (-20°C / > 34J) EN15608	-	-	max 0.22%C, max 0.55% Si, max 1.6%Mn, max 0.3% Ni, max 0.3% Cr, max 0.08% Mo	Tensile 450-630 N/mm2, Yield>355N/mm2, A5>17%, KCV >34J/-60°C

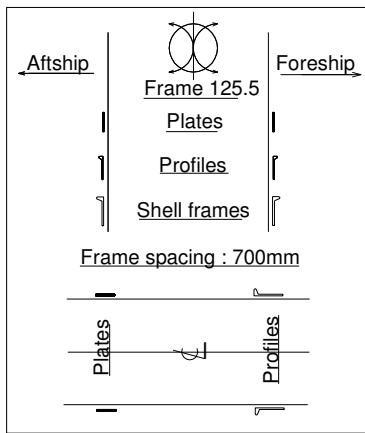
Non-destructive testing	As per weld inspection sheet
-------------------------	------------------------------

FILLER METALS			
Filler trade name	DWA 55LSR	None	None
Consumable brand	ITW Elga	None	None
Spec. No. (SFA)	SFA A5.29-80	None	None
AWS No. (Class)	E81T1-Ni1	None	None
F-No.	6	NA	NA
A-No.	1	NA	NA
Consumable diamete	1,2	NA	NA
Electrode-flux (class)	NA	NA	NA
Flux trade name	NA	NA	NA
Consumable insert	NA	NA	NA
Remarks			

ELECTRICAL CHARACTERISTICS									
Weld process	Class or trade name	Diamete r (mm)	Current and polarity	Amperage +/- 10%	Voltage +/- 10%	Eff	Travel speed (mm/min)	Heat Input (kJ/mm)	
Rootlayer: R	136	DWA55LSR	1,2 DC/+	200	26	0.8	200	1.2	
Hotpass: H									
Filling: F									
Filling: F									
Filling: F									
Filling: F									
Cap: C									
Remarks 2									

NOTES

1. PORT & STARBOARD SIDES ARE SIMILAR EXCEPT NOTED.
2. TRANSVERSE SECTIONS ARE DRAWN LOOKING FORWARD, AND LONGL. SECTIONS LOOKING TO PORT
3. THE FITTING SIDE AT MOULD LINE OF MEMBERS IS AS SHOWN BELOW UNLESS NOTED OTHERWISE IN THE DRAWING



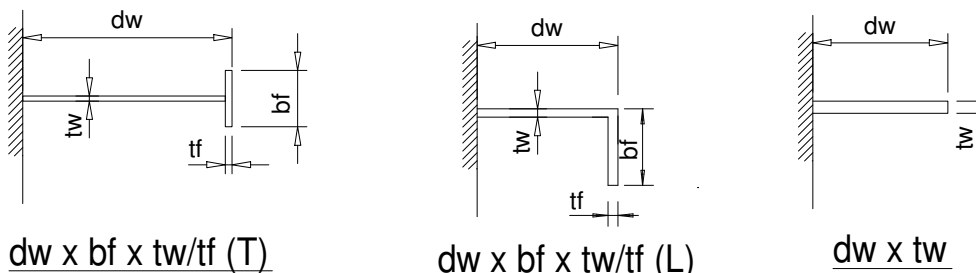
4. FOR OTHER MEMBERS, IN GENERAL THE FITTING SIDE IS IN THE SAME DIRECTION SHOWN BY ARROWS TO INDICATE DIMENSION / SPACING OR AS SHOWN BY THE THICKNESS MARK.
5. ALL STEEL IN SHIP : MINIMUM STEEL GRADE AH36 UNO. ALL STEEL WITH Z PROPERTIES ARE Z35.
6. 300 mm IN WAY OF BLOCK BUTT NOT TO BE WELDED
7. BLOCK TO BE FABRICATED INSITU AS FAR AS PRACTICABLE
8. REFERENCE DRAWING:
 - 8.1 63552-0320.010- CONSTRUCTION PLAN AFTSHIP REV.0
 - 8.2 63552-1201.010- SECTION DRAWING OF UNIT DS02P
 - 8.3 63552-1202.010- SECTION DRAWING OF UNIT DS02S
 - 8.4 63552-0338.010- GENERAL ARRANGEMENT REV.C
 - 8.5 63552-0353.010- TANK PLAN REV.C

WELDING DETAILS

1. MINIMUM THROAT THICKNESS 3.5mm UNLESS OTHERWISE SPECIFIED
2. THE SIZE OF FILLET WELD *in* SPECIFIC AREAS ARE SHOWN ON THE DRAWING AND SAME IS TO BE APPLIED TO ALL SIMILAR CONNECTIONS HAVING SAME THICKNESS
3. FULL AND DEEP PENETRATION WELDS TO BE APPLIED AS INDICATED IN THE DRAWING.
4. ALL WELDS ARE DOUBLE CONTINUOUS UNLESS NOTED OTHERWISE
5. EXCESS/ OVER WELDING THAN NECESSARY MUST BE AVOIDED TO PREVENT LARGE DEFORMATION.
6. ALL THE ELECTRODES USED TO BE CLASS APPROVED TYPE AND TO BE PROPERLY DRIED BEFORE USE
7. THE SURFACE OF THE ALL PARTS TO BE WELDED SHOULD BE CLEAN, DRY AND FREE FROM THE RUST, SCALE AND GREASE. THE SURFACES AND BOUNDARIES OF EACH RUN OF DEPOSIT TO BE THOROUGHLY CLEANED AND FREED FROM SLAG BEFORE THE NEXT RUN IS APPLIED.
8. ALL WELDS TO COMPLY WITH CLASSIFICATION REQUIREMENTS AND TO THE ATTENDING CLASSIFICATION SURVEYOR'S SATISFACTION
9. ALL WELDS THROUGHOUT ARE TO BE SOUND, UNIFORM AND SUBSTANTIALLY FREE FROM SLAG INCLUSION, POROSITY, UNDERCUT AND OTHER DEFECTS
10. PROPER WELDING SEQUENCES ARE TO BE APPLIED AND EVERY EFFORT IS TO BE MADE TO AVOID LOCKED IN STRESSES
11. TACK WELDS ARE TO BE KEPT TO A PRACTICAL MINIMUM
12. BACKING STRIP FOR FP AND DP WELDS 10 MM THICK U.N.O.

SCANTLING INDICATING SYSTEM

SCANTLINGS OF BUILT-UP SECTIONS, ANGLE BARS AND FLAT BARS ARE INDICATED IN THIS DRAWING AS FOLLOWS:



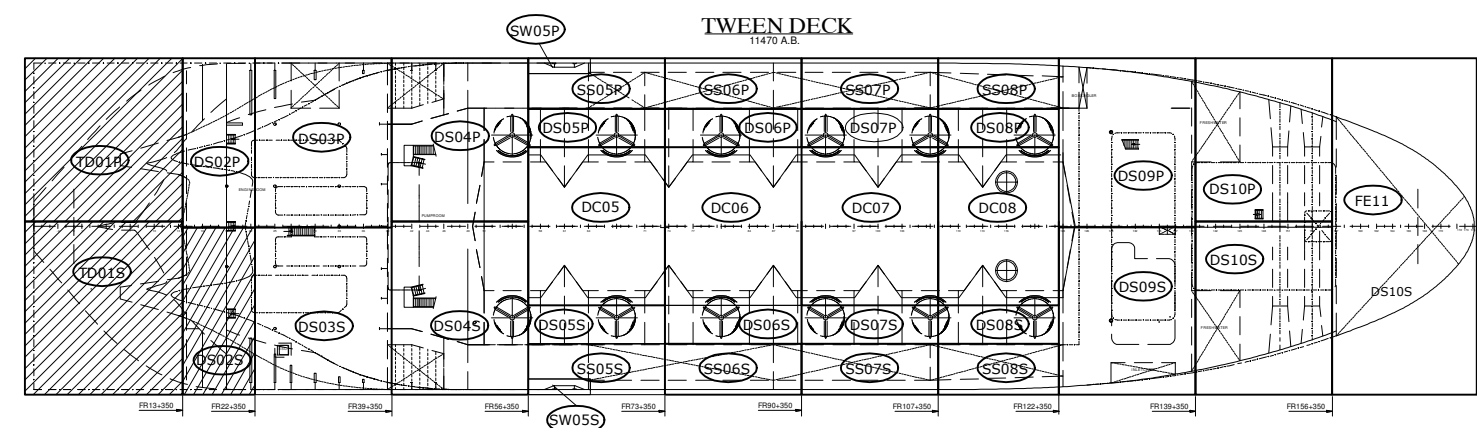
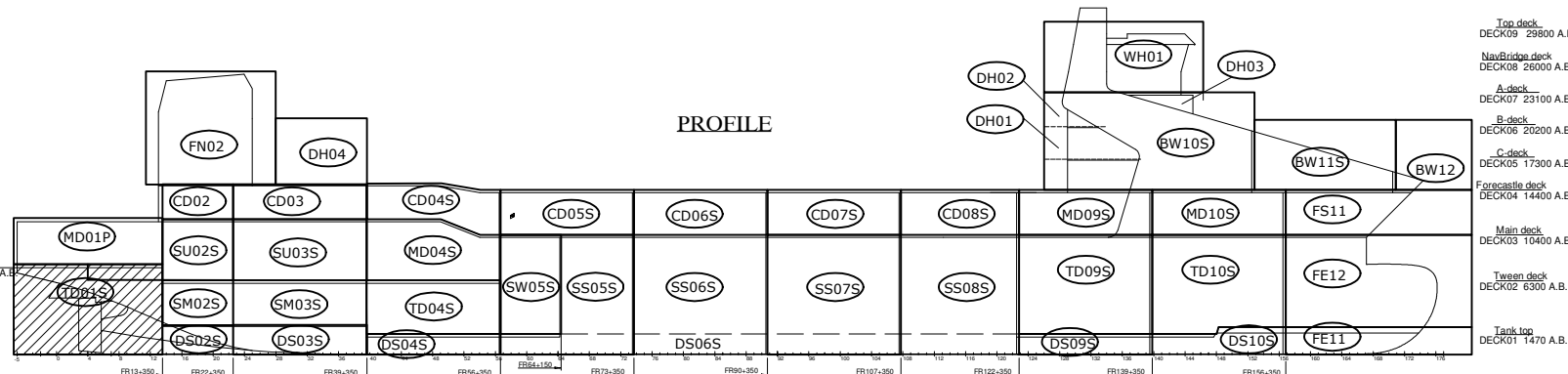
CONTENTS

PAGE	DESCRIPTION
02	CHECK DIMENSION
03	BLOCK PROCESS
04	BLOCK PROCESS
05	SHELL EXPANSION (PORT)
06	SHELL EXPANSION (AROUND PROPELLAR SHAFT), DET. OF STEERING GEAR FOUNDATION
07	TWEEN DECK 6300 ABL. (PORT)
08	TWEEN DECK 6300 ABL. (STBD)
09	DECK 7700 ABL. (PORT)
10	DECK 7700 ABL. (STBD)
11	LONG. SEC. AT CENTER LINE, TRANS. SEC. I W O SKEG
12	LONG. SEC. AT 700 OFF CL (P), 1175 OFF CL (P) & 1400 OFF CL (P)
13	LONG. SEC. AT 2100 OFF CL (P&S) & 2800 OFF CL (P)
14	LONG. SEC. AT 3500/3393/3403 OFF CL (P) & 4200/4216 OFF CL (P)
15	LONG. SEC. AT 4900/4865 OFF CL (P), 4550 OFF CL (P), 5600 OFF CL (P&S) & 5180 OFF CL (P)
16	LONG. SEC. AT 6250/6500/6390 OFF CL (P), 5138/5800/5600 OFF CL (P), LONG. SEC. AT 6250 OFF CL (P), 6900/6875/6800 OFF CL (P) & 6900 (S) LONG. SEC. AT 6250 OFF CL (P), 6900/6875/6800 OFF CL (P) & 6900 (S)
17	LONG. SEC. AT 7550 & 8200 OFF CL (P)
18	LONG. SEC. AT 8900 OFF CL (P&S)
19	LONG. SEC. AT 9600 (P), 10300 (P), 11075 OFF CL (P&S)
20	LONG. SEC. AT 11850 (P), 12625 (P&S) OFF CL, DET. OF SKEG
21	TRANS. SEC. AT FR-5, FR-4, FR-3 & FR-2
22	TRANS. SEC. AT FR-1, FR0, & FR1
23	TRANS. SEC. AT FR2, FR3, & FR4
24	TRANS. SEC. AT FR5, FR6, & FR7
25	TRANS. SEC. AT FR8 & FR9
26	TRANS. SEC. AT FR10 & FR11
27	TRANS. SEC. AT FR12 & FR13
28	TRANS. SEC. AT FR14 (PORT)
29	TRANS. SEC. AT FR14 (STBD)
30	DETAIL SHEET
31	DETAIL SHEET

PRINCIPAL DIMENSIONS

Length overall (hull)	approx.	127.0 m
Length between p.p.		117.0 m
Breadth		28.40m
Depth		10.4 m
Draught at international freeboard		8.0 m
Dredging depth at 5°		36.0 m
Suction pipe diameter		900 mm
Hopper capacity		12.0 m3
Complement		30 pers.
Maximum service speed		15 knots
Frame Spacing		700 mm

REV-0



Top deck
DECK09 29800 A.B.
Nav/Bridge deck
DECK08 26000 A.B.
A-deck
DECK07 23100 A.B.
B-deck
DECK06 20200 A.B.
C-deck
DECK05 17300 A.B.
Forecastle deck
DECK04 14400 A.B.
Main deck
DECK03 10400 A.B.
Tween deck
DECK02 6300 A.B.
Tank top
DECK01 1470 A.B.

ALL DIMENSIONS ARE IN mm. (EXC. NOTED)

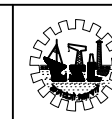
BLOCK	WEIGHT(T)	C.O.G.		
		FR	Y(m)	Z(m)
TD01	TD01 (P)=115.85T	X=FR4+54	5.39	5.65
	TD01 (S)=111.19T	X=FR4+52	-5.58	5.65
	SKEG=8.21T	X=FR9-122	002.00	1.75



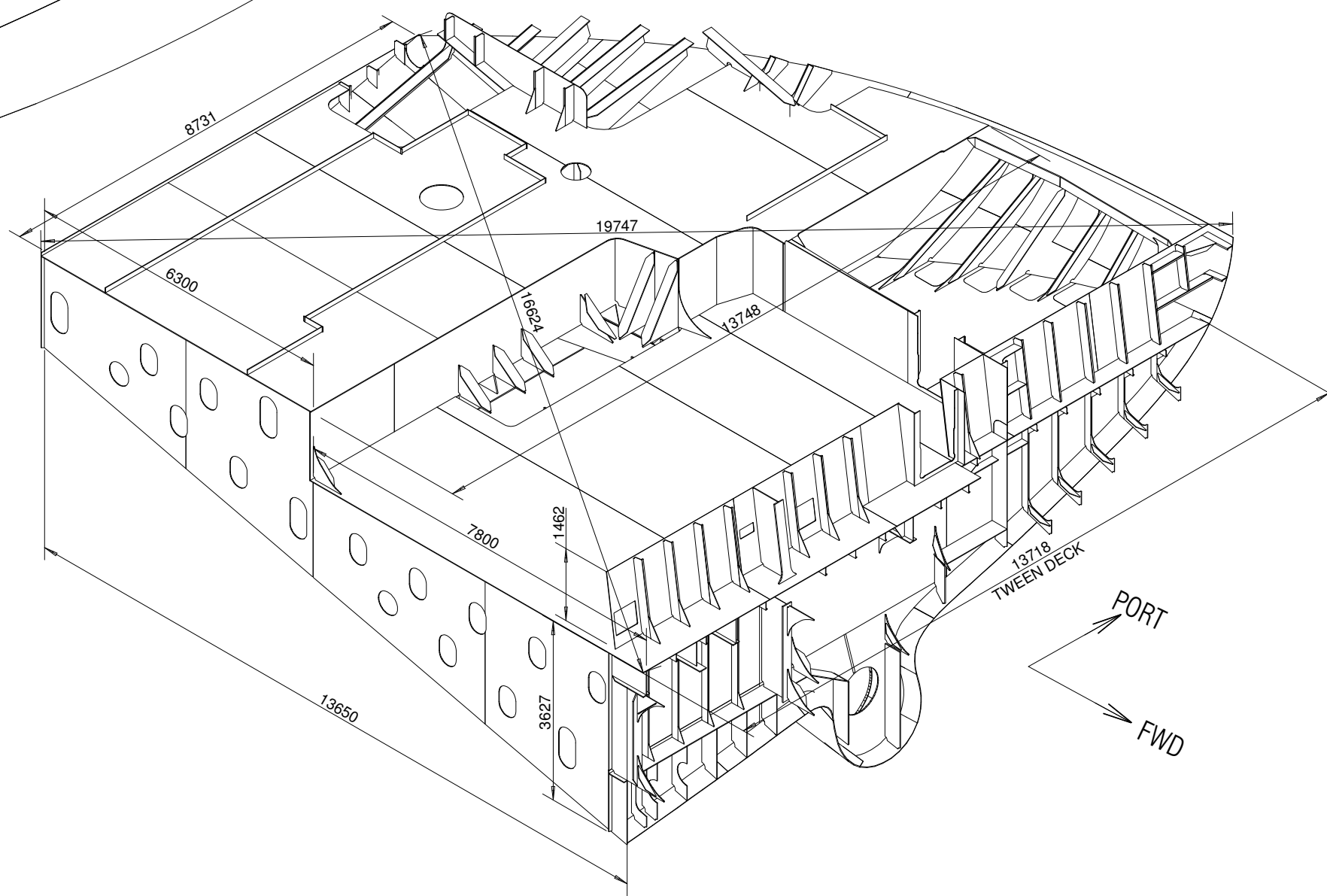
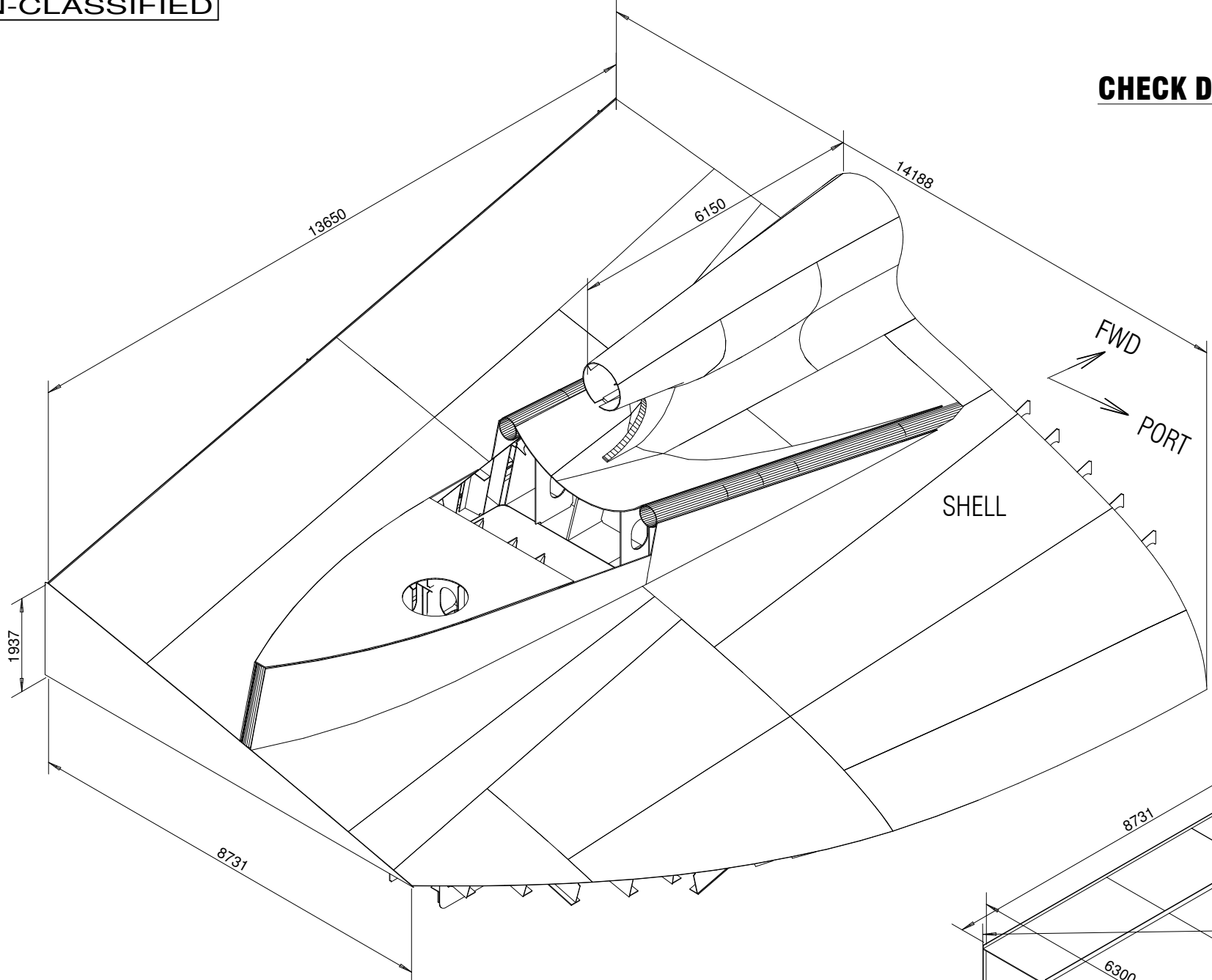
COCHIN SHIPYARD LIMITED
COCHIN - 682 015

YARD No: S037	TRAILING SUCTION HOPPER DREDGER				
APPROVED <i>Bimoy Chandran</i>	UNIT-TD01				
CHECKED <i>Pallavi Yempada</i>					
DRAWN <i>Mahesh</i>					
DATE : 08-08-2024	SCALE : N.T.S	DWG. No. S037W00TD01			
ISSUED TO	DEPT.	PLG.	O.C.	O.C.	SHT NO.
No. 5		1	1		01/31
					A3X31

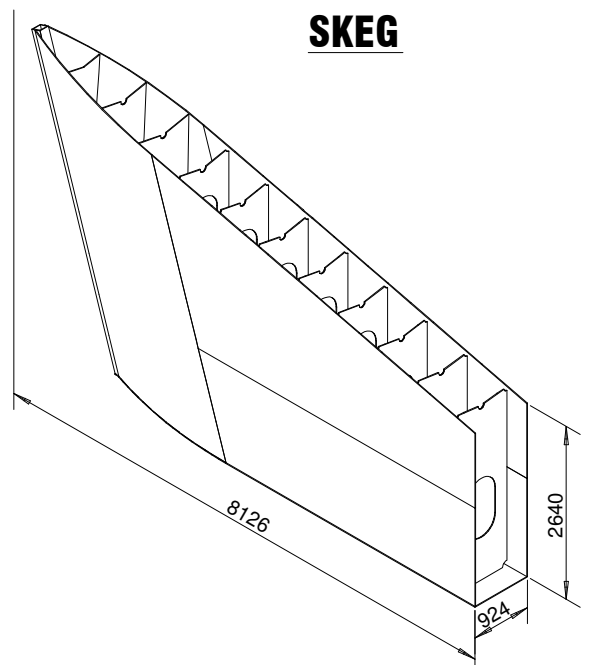
NON CLASSIFIED

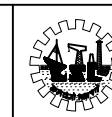


CHECK DIMENSION



SKEG

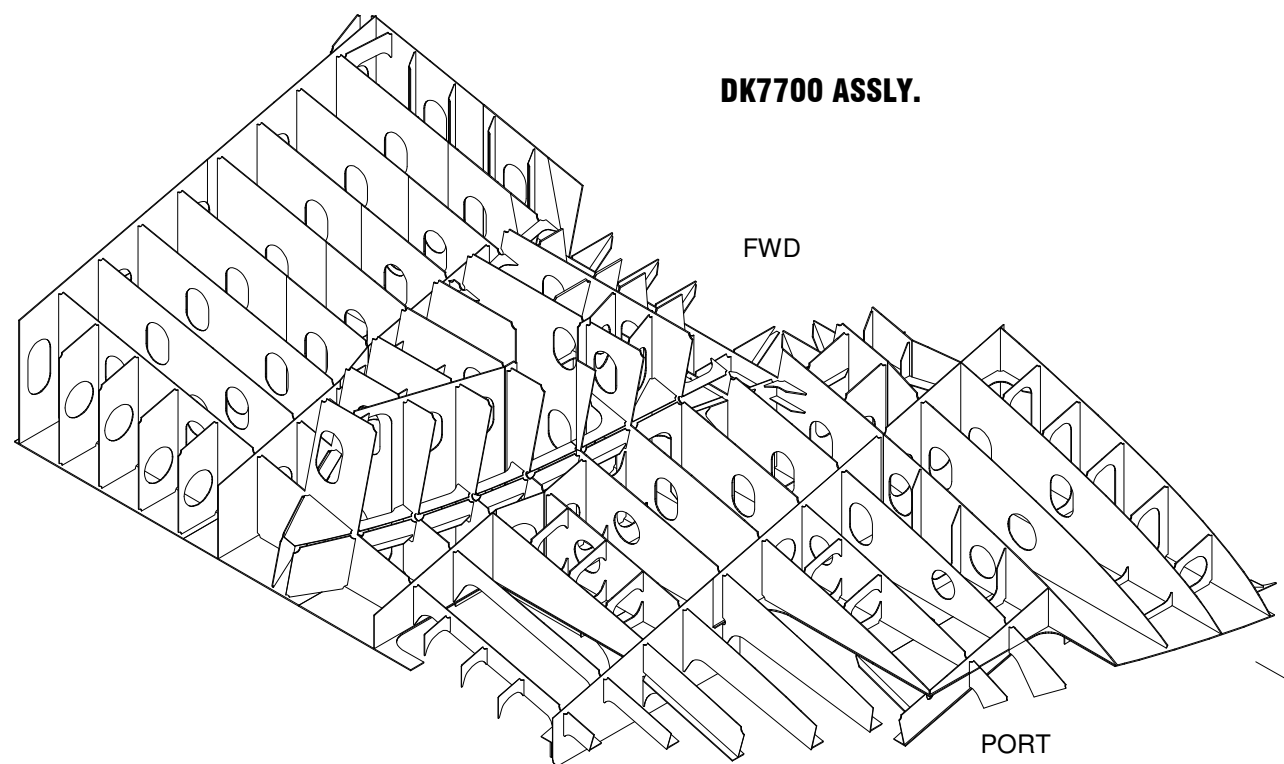




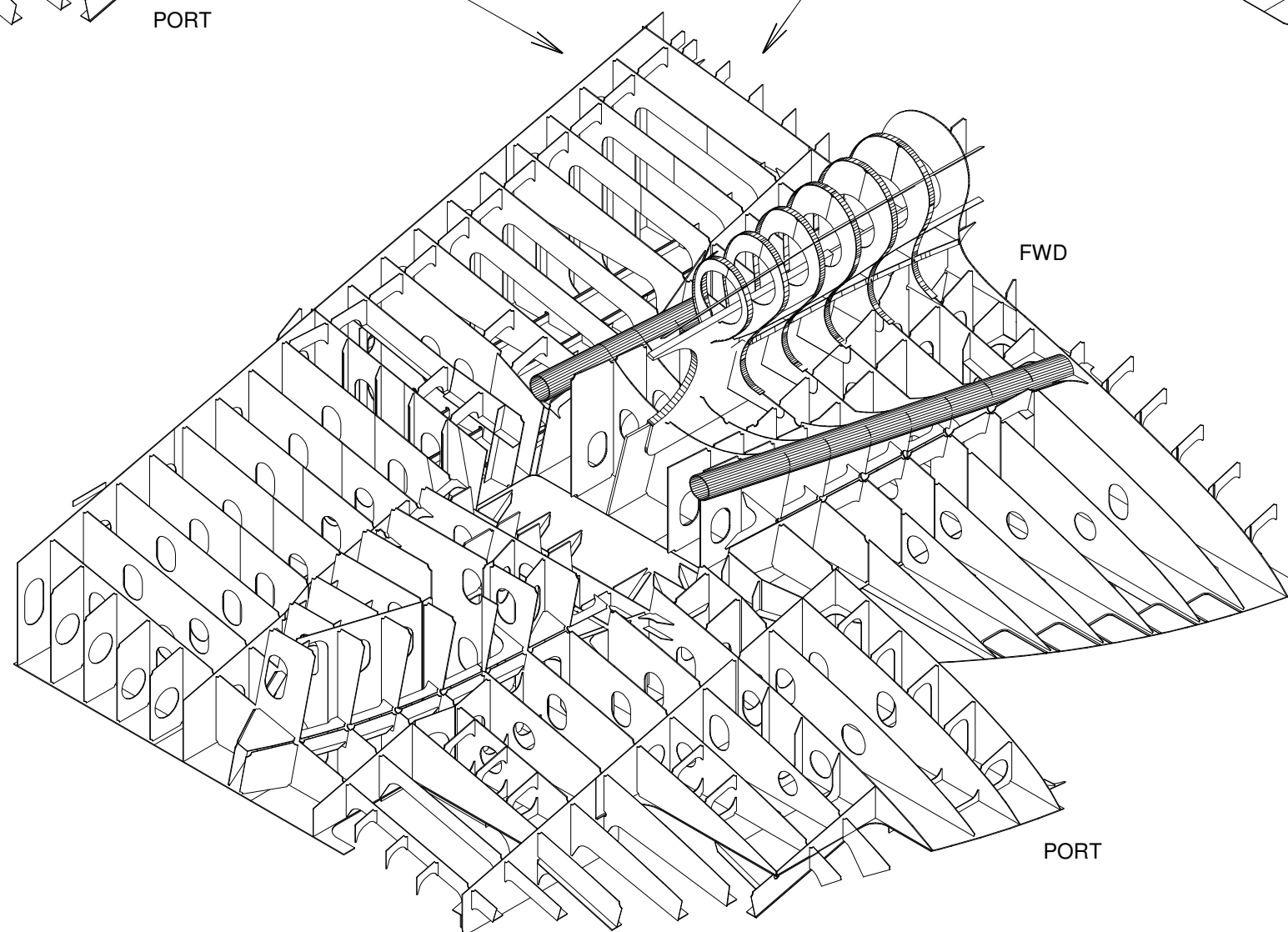
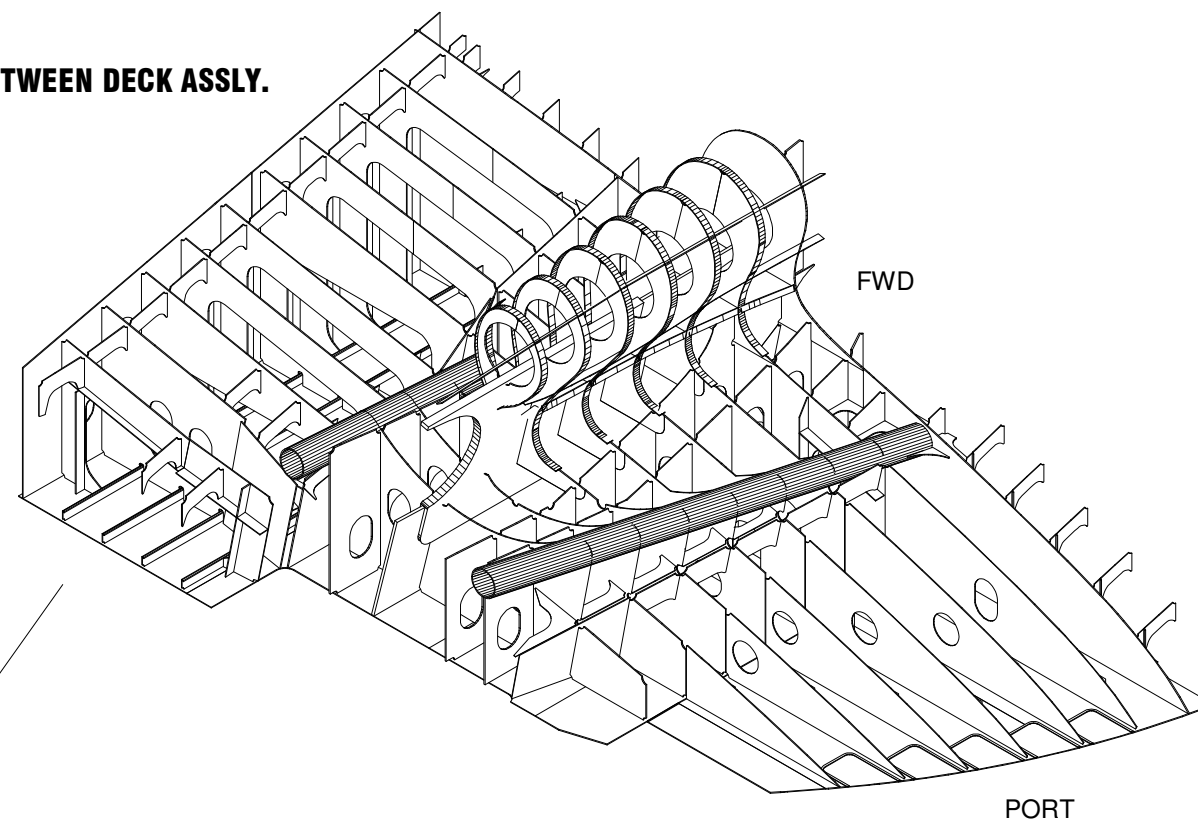
BLOCK PROCESS (PORT)

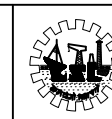
(STB SIMILAR)

DK7700 ASSLY.



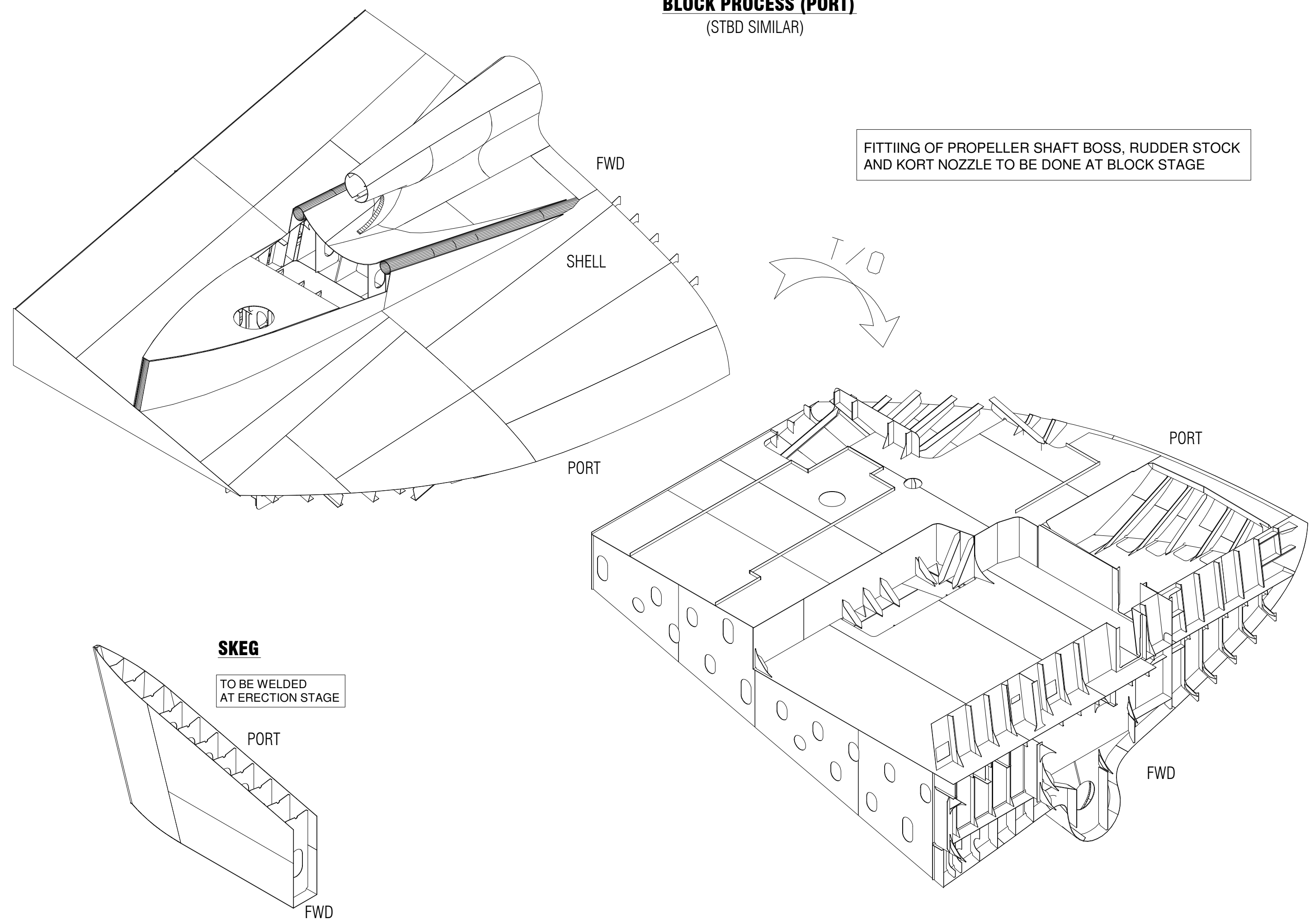
TWEEN DECK ASSLY.





BLOCK PROCESS (PORT)

(STBD SIMILAR)

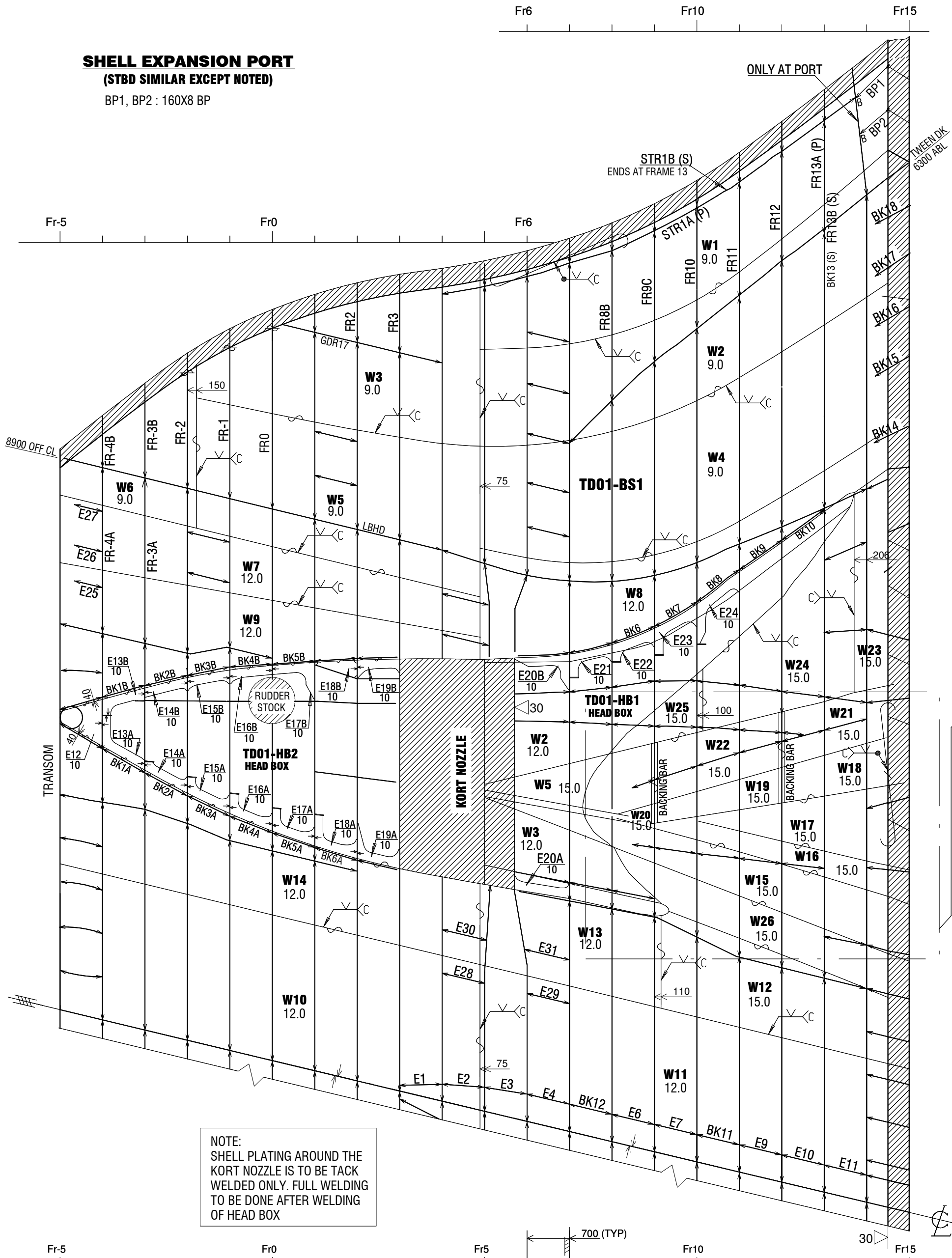


FITTING OF PROPELLER SHAFT BOSS, RUDDER STOCK AND KORT NOZZLE TO BE DONE AT BLOCK STAGE

SKEG
TO BE WELDED AT ERECTION STAGE

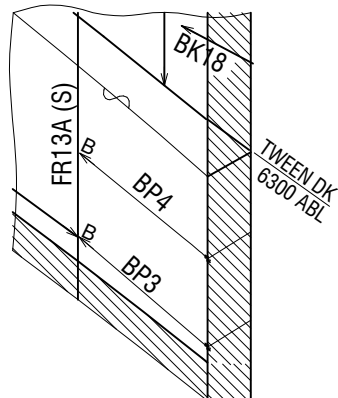
SHELL EXPANSION PORT (STBD SIMILAR EXCEPT NOTED)

BP1, BP2 : 160X8 BP



NOTE:
SHELL PLATING AROUND THE
KORT NOZZLE IS TO BE TACK
WELDED ONLY. FULL WELDING
TO BE DONE AFTER WELDING
OF HEAD BOX

REF. DETAIL 'A' PAGE No.00/00
FOR EXPANSION OF SHELL PLATES
AROUND SHAFT

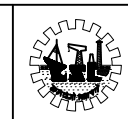


SHELL EXPANSION (STBD)

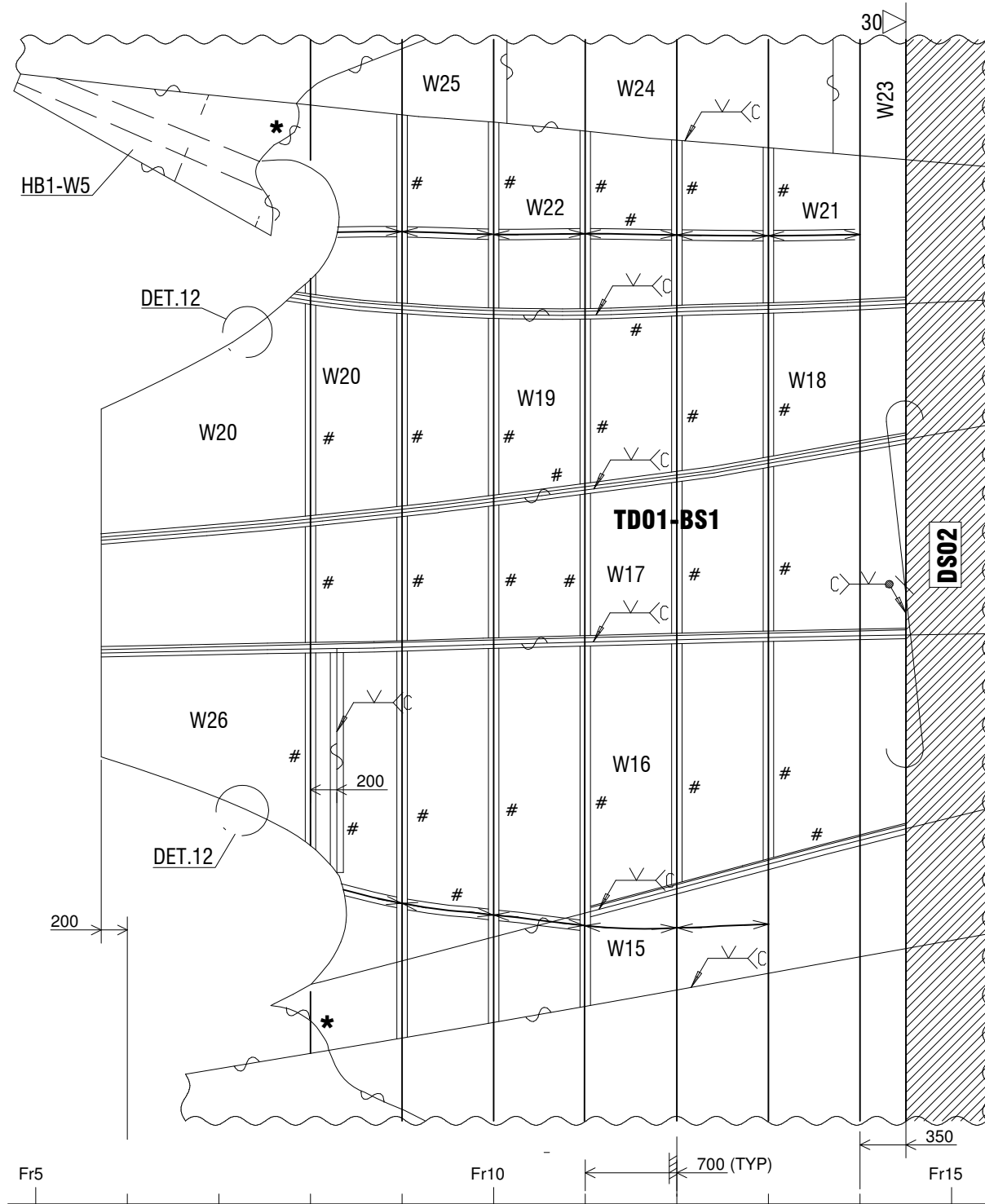


SHIP No.	BLOCK No.	PAGE
09185/86	00171-17D01	05/31

S037W001D01-04-B5-P

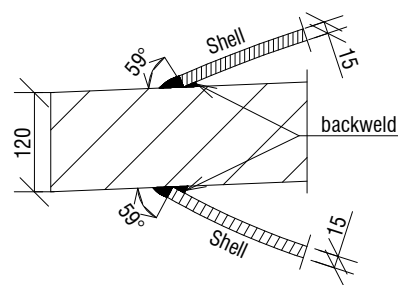


DETAIL 'A'
(SHELL VIEW AROUND SHAFT)
SHELL PLATING : 15 mm



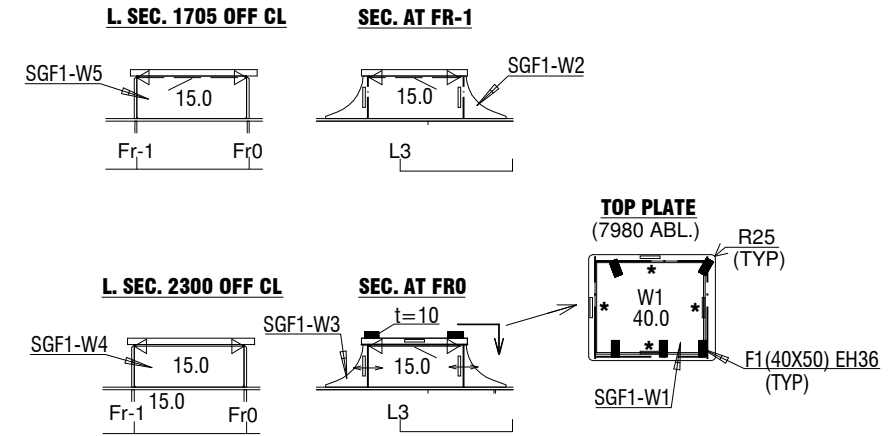
BACKING BAR (80X8 FB) PROVIDED FOR SLOT WELDING

* THIS JOINT BETWEEN HEAD BOX AND SHELL TO BE CUT AND WELD AS SUIT AT SITE



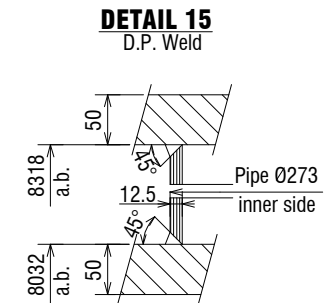
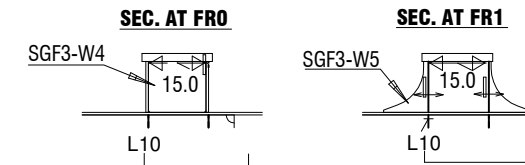
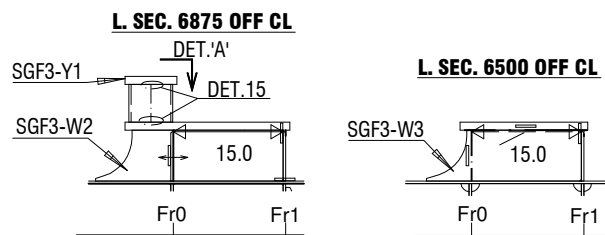
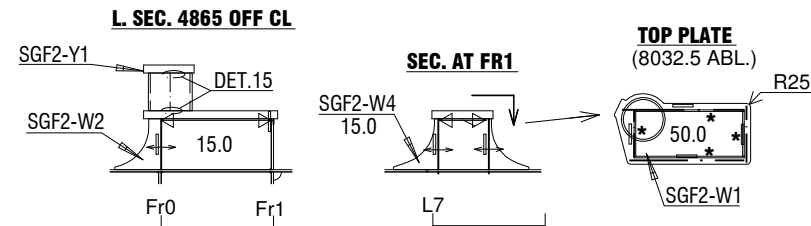
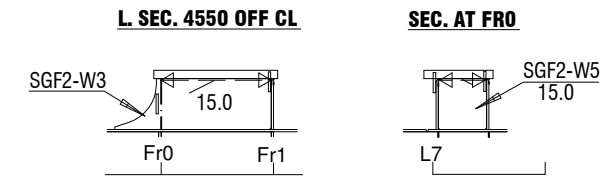
DETAIL 12
D.P. Weld

DETAILS OF STEERING GEAR FOUNDATIONS
(P&S SIMILAR)

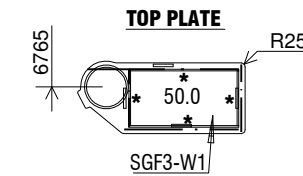


* BACKING BAR (10 mm Sq. BAR) PROVIDED INSIDE FOR FP WELDING

† INDICATES THROAT THICKNESS

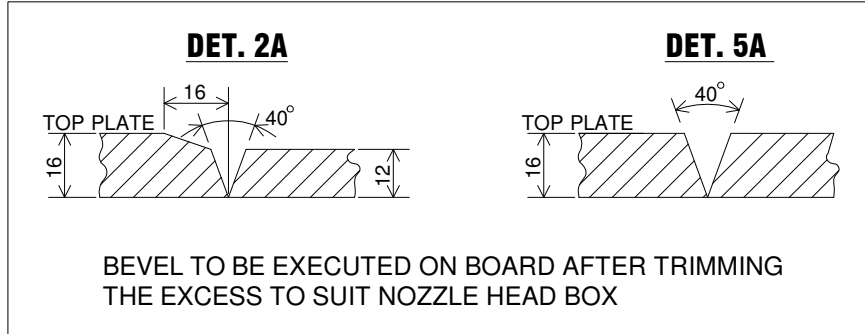
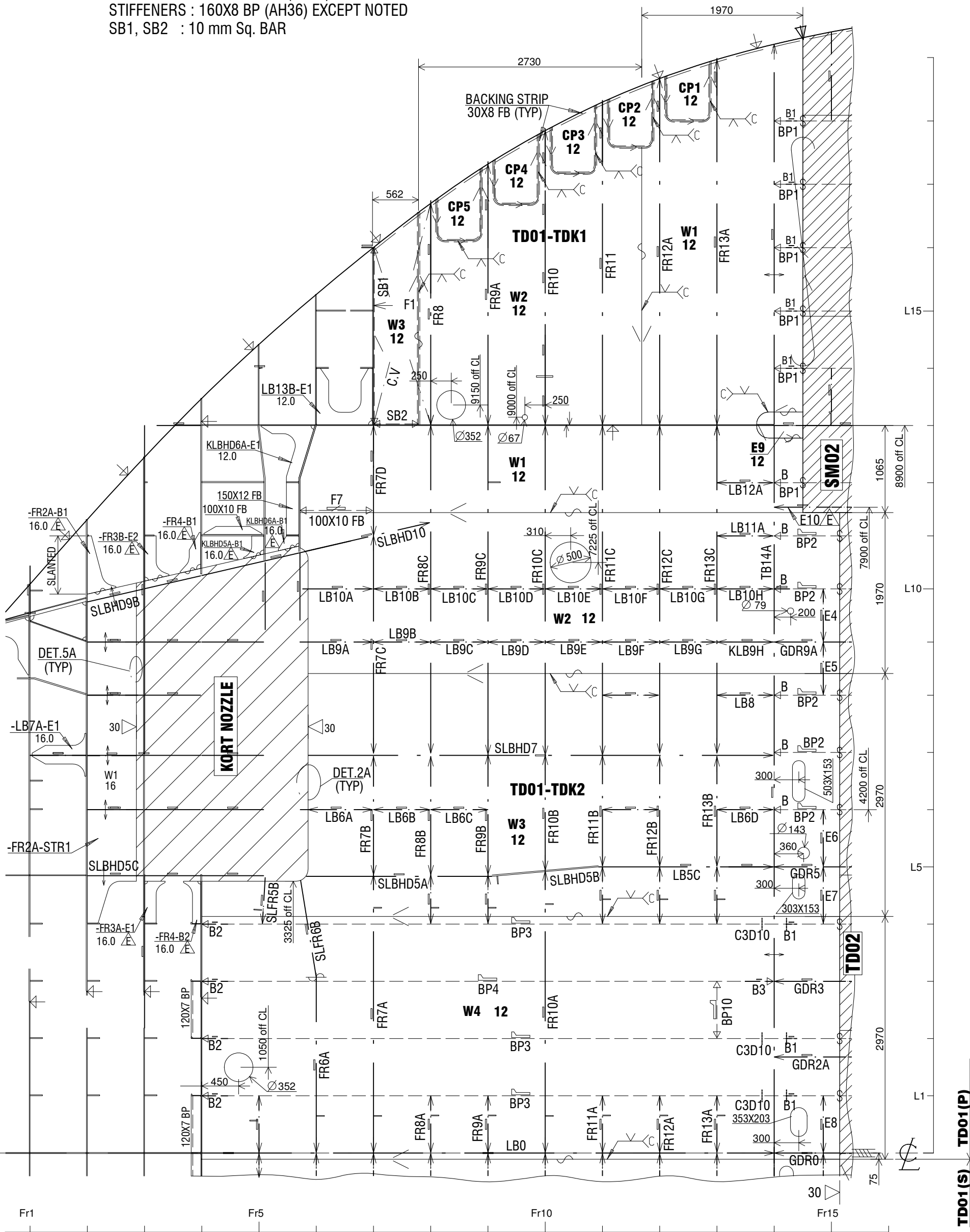


DETAIL 'A'
(TYP)
SGF3-Y1-W1 50 (EH36)
SGF3-Y1-P1 PIPE Ø23 mm (DH36)



TWEEN DECK 6300 ABL.(P)

PLATE THICKNESS : 12 MM (AH36)
STIFFENERS : 160X8 BP (AH36) EXCEPT NOTED
SB1, SB2 : 10 mm Sq. BAR

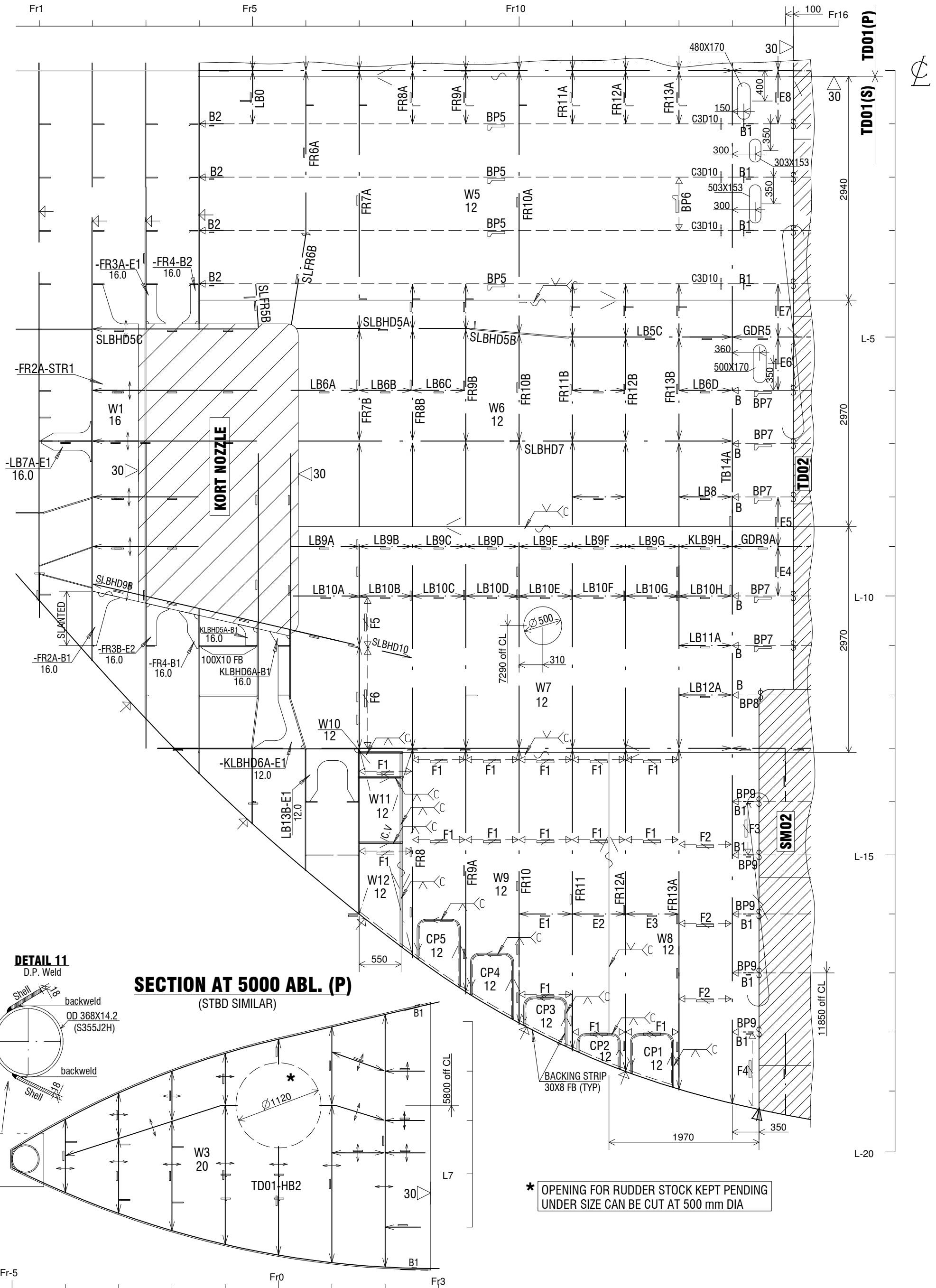


	SHIP No.	6185/86
	BLOCK No.	QJNT-LTD01
	PAGE	07/31

E307W001TD01-06-TDK-P

TWEEN DECK 6300 ABL.(S)

PLATE THICKNESS : 12 MM (AH36)
 STIFFENERS : 160X8 BP (AH36) EXCEPT NOTED
 : F1 TO F6 (100X10 FB)

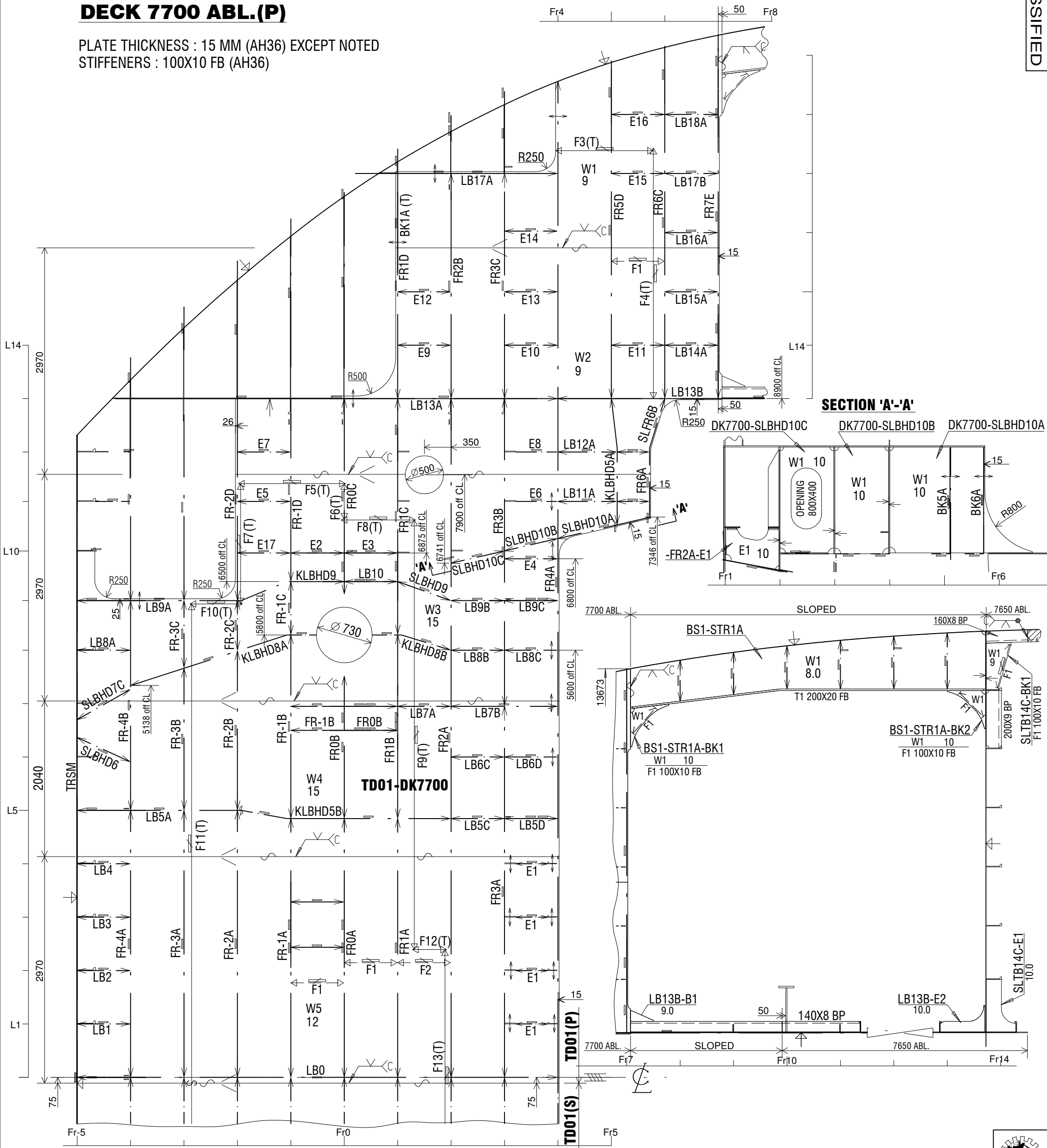


	SHIP No.	BLOCK No.	PAGE
	09185/86	01NT7-TD01	08/31

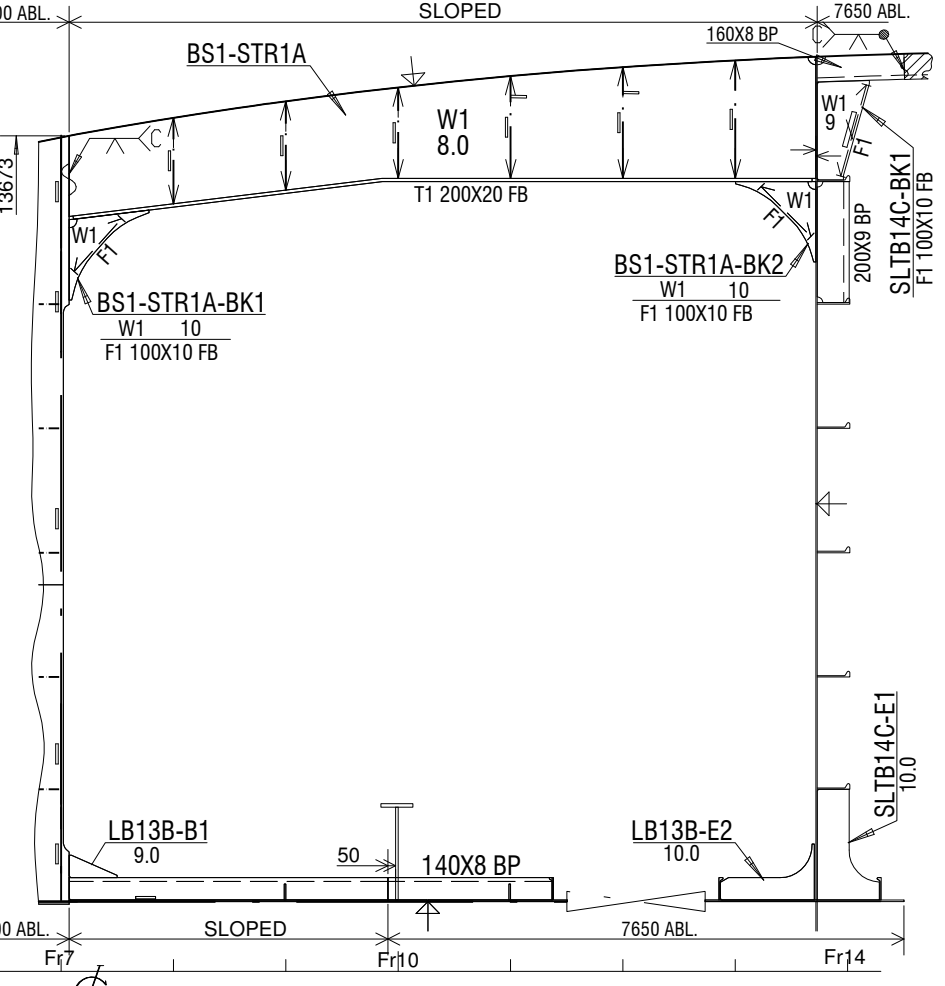
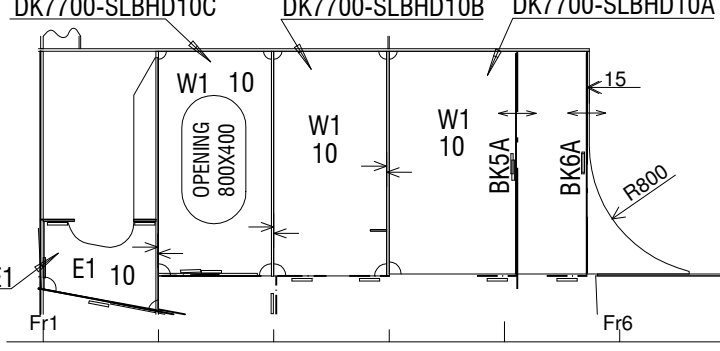
S037W00TD01-07-TDK-S

DECK 7700 ABL.(P)

PLATE THICKNESS : 15 MM (AH36) EXCEPT NOTED
STIFFENERS : 100X10 FB (AH36)



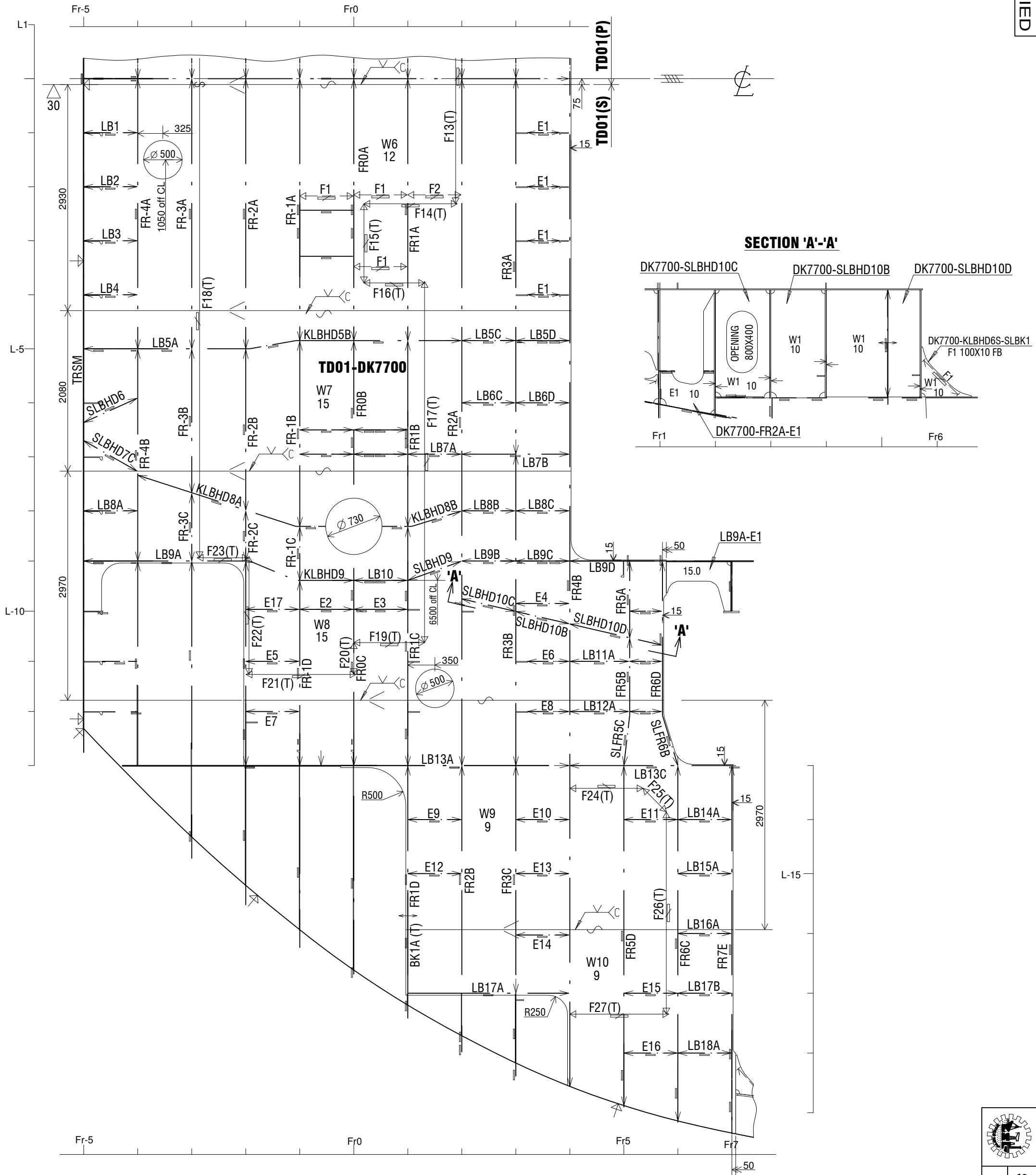
SECTION 'A'-A'



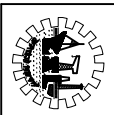
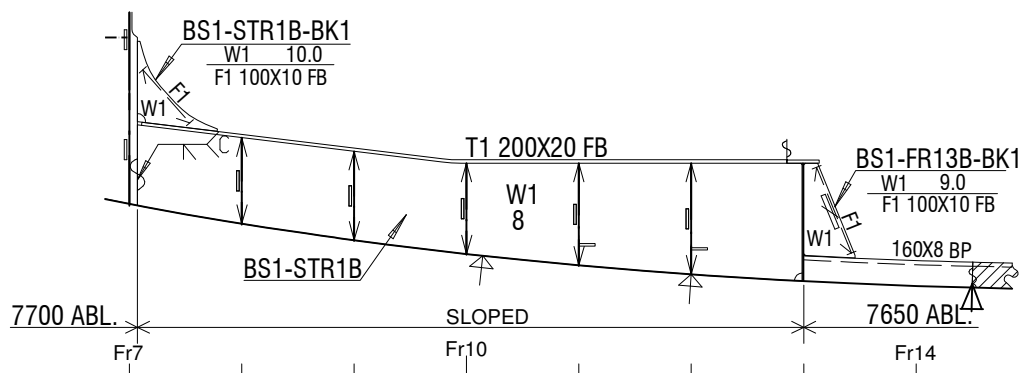
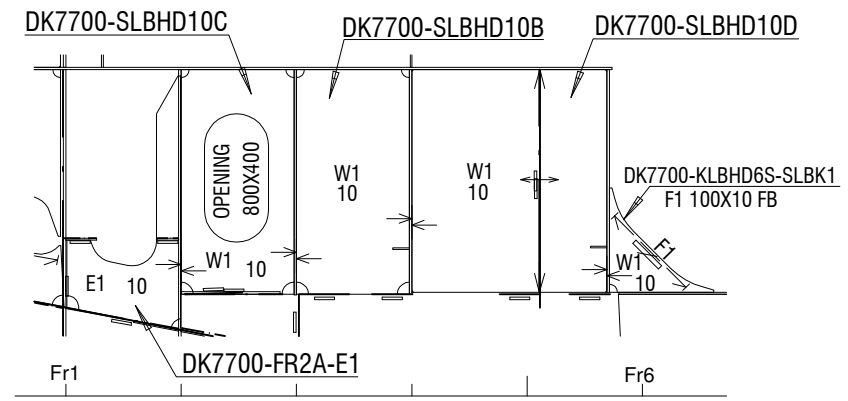
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BLOCK No.	01/17-17D01
PAGE	09/31

TWEEN DECK 7700 ABL(S)

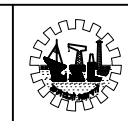
PLATE THICKNESS : 15 MM (AH36) EXCEPT NOTED
STIFFENERS : 100X10 FB (AH36)



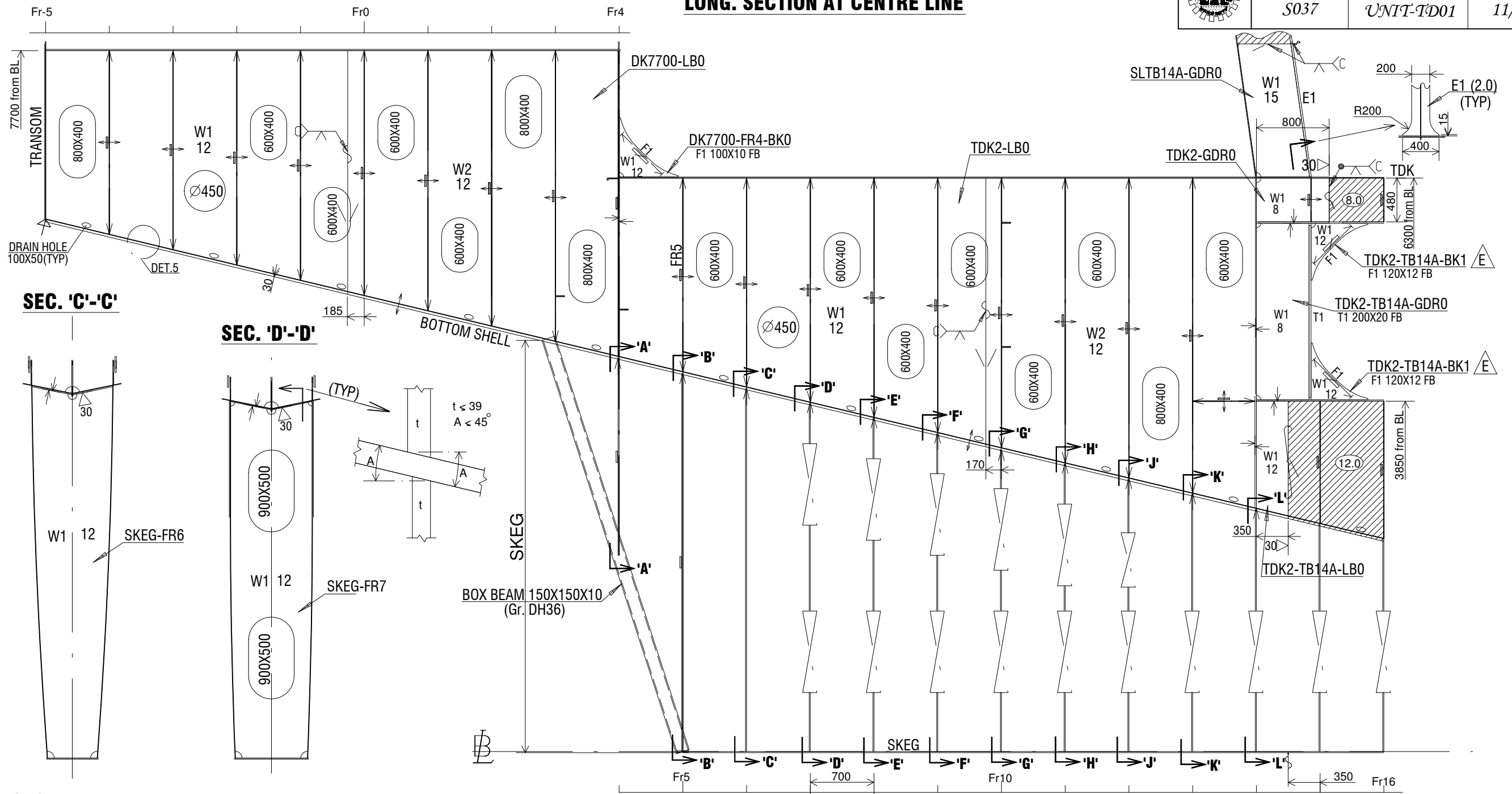
SECTION 'A'-'A'



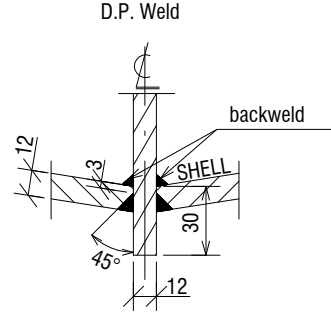
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BLOCK No.	QJNT7-TD01
PAGE	10/31



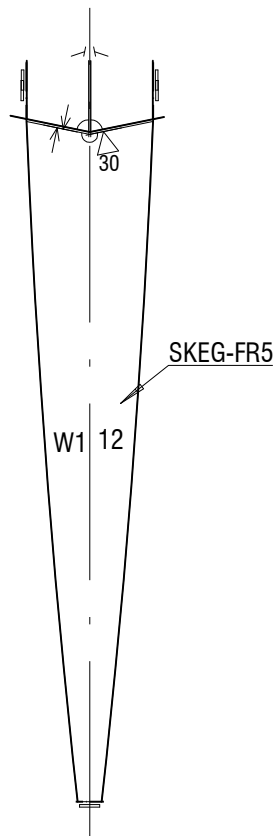
LONG. SECTION AT CENTRE LINE



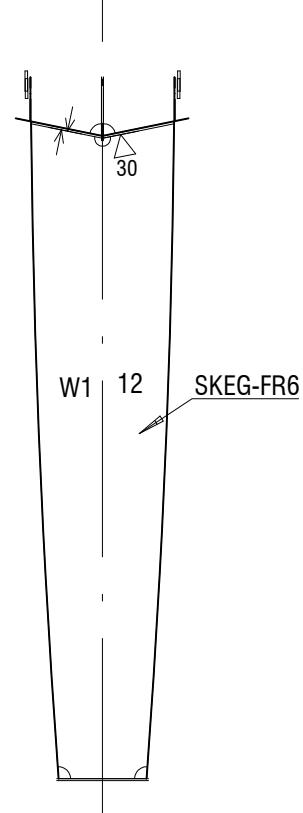
DETAIL 5



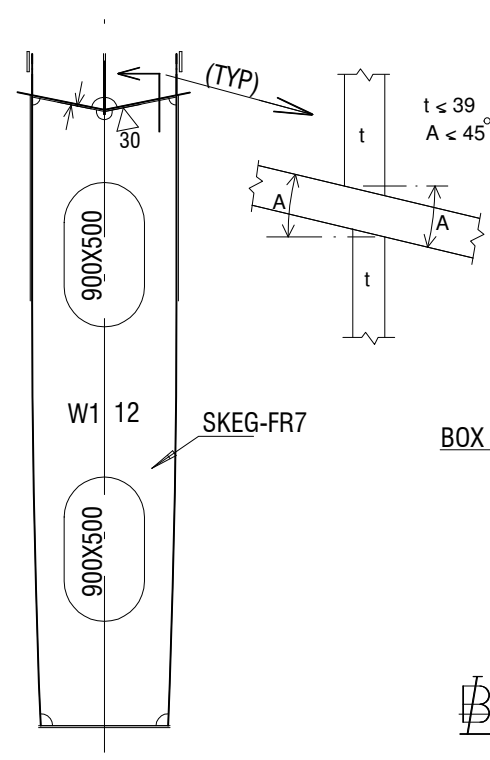
SEC. 'B'-'B'



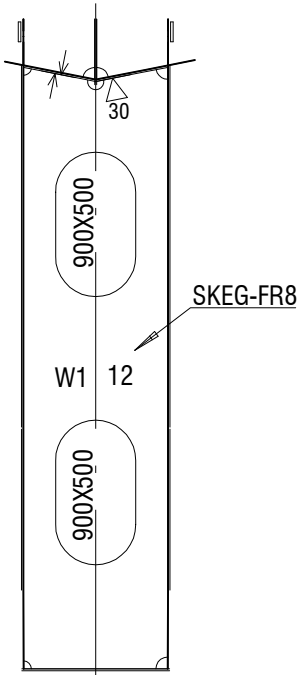
SEC. 'C'-'C'



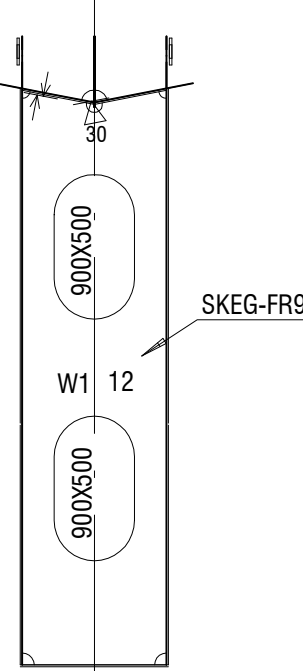
SEC. 'D'-'D'



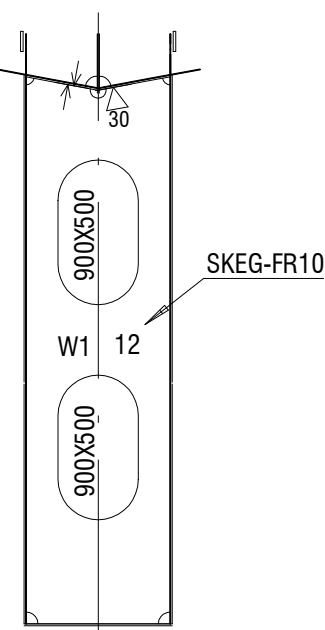
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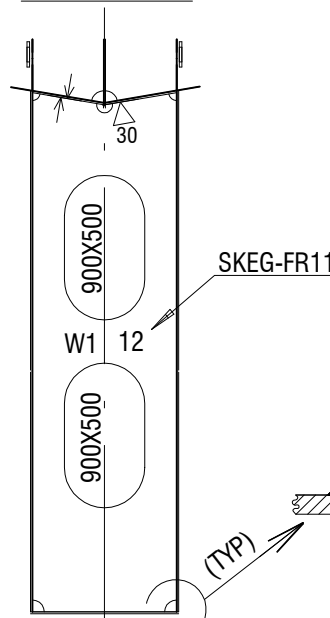
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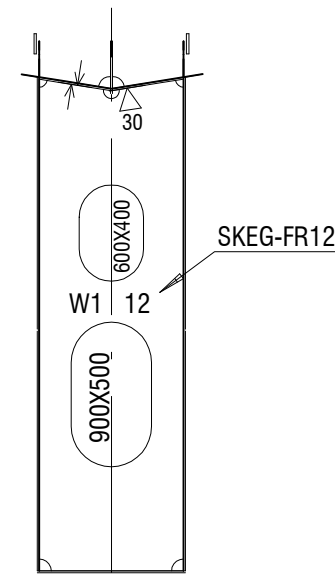
SEC. 'G'-'G'



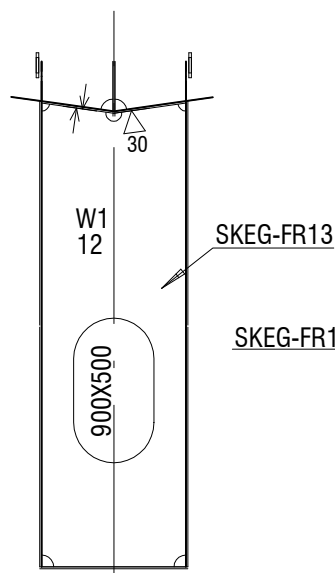
SEC. 'H'-'H'



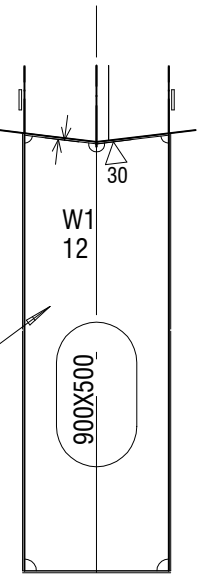
SEC. 'J'-'J'

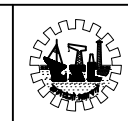


SEC. 'K'-'K'

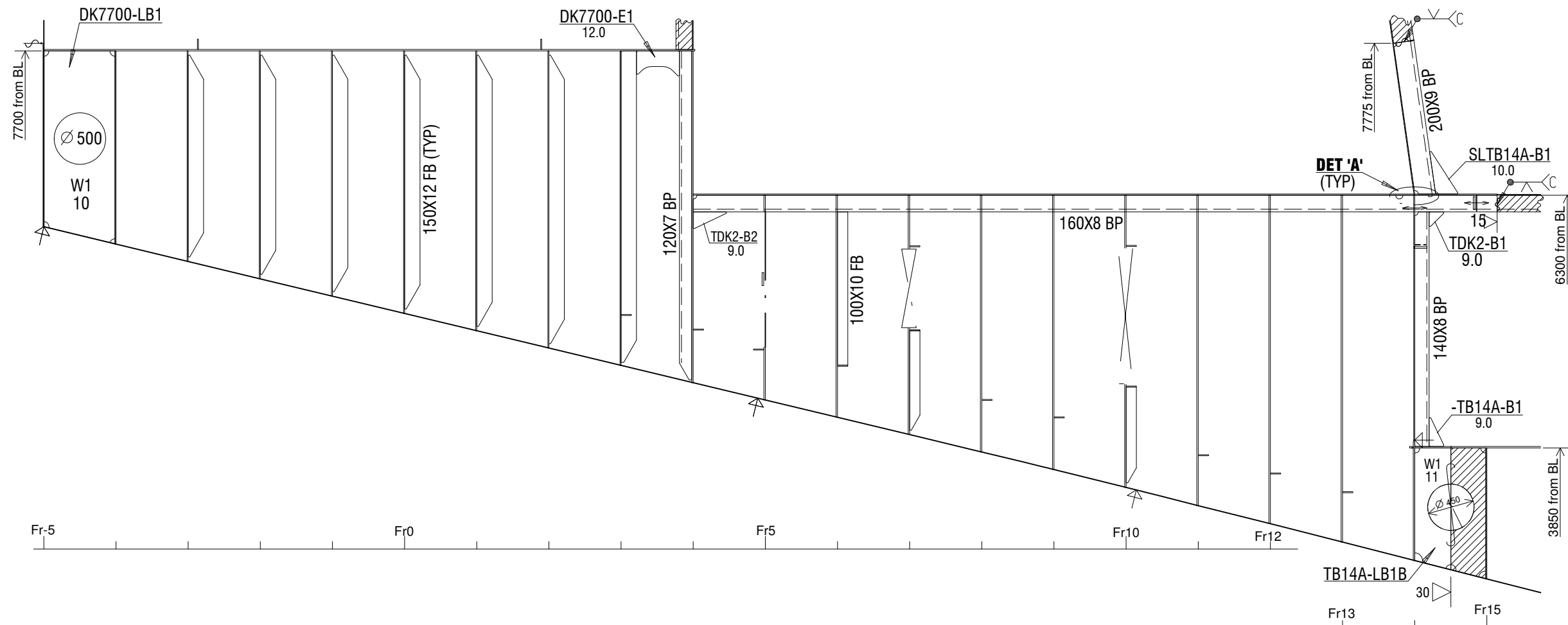


SEC. 'L'-'L'

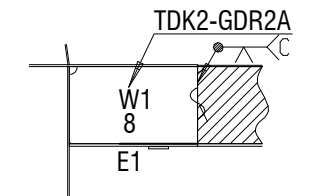




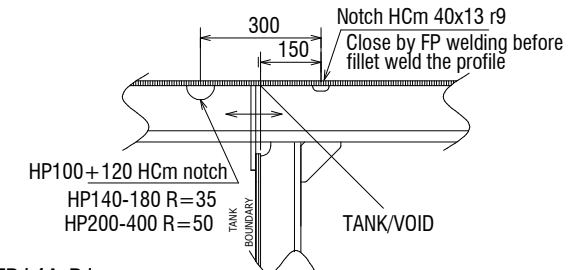
LONG. SEC. AT 700 OFF CL (P), SB SIMILAR



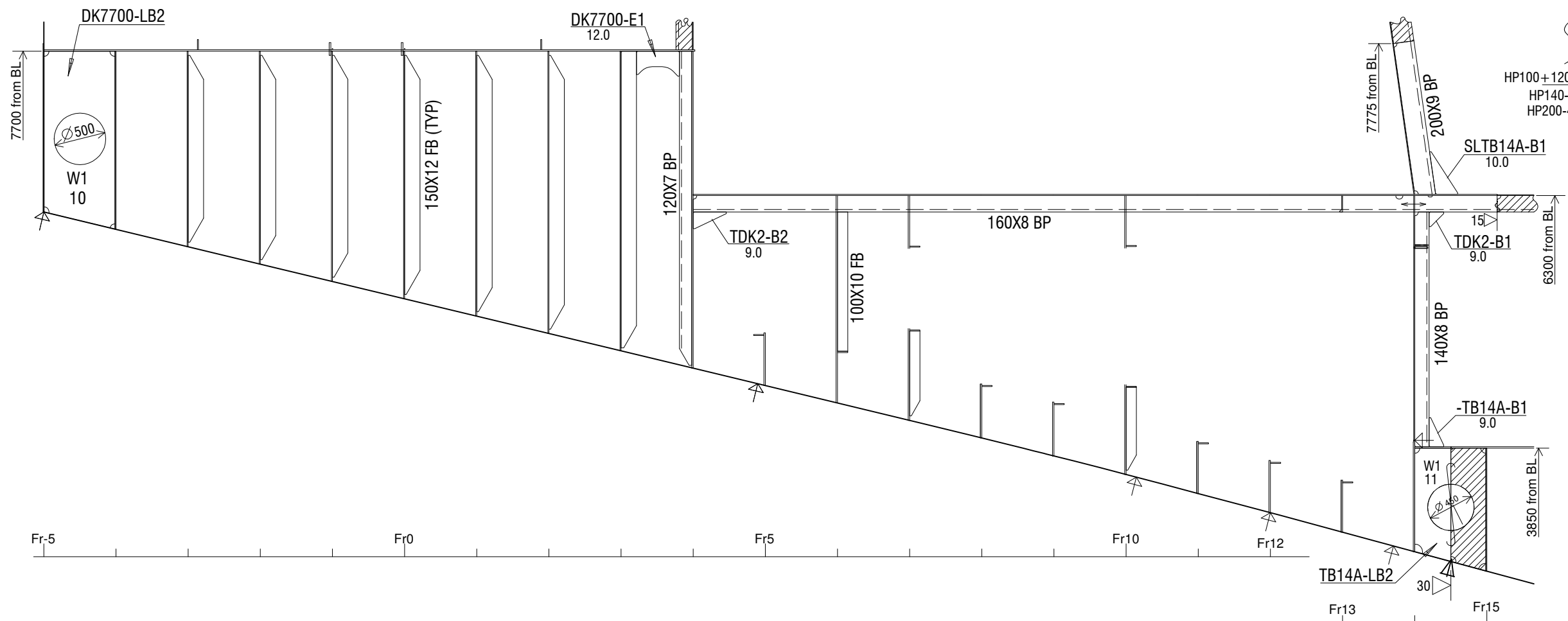
LON. SEC AT 1175 OFF CL (P)

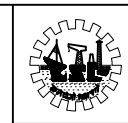


DET 'A'
Profile through tank boundary



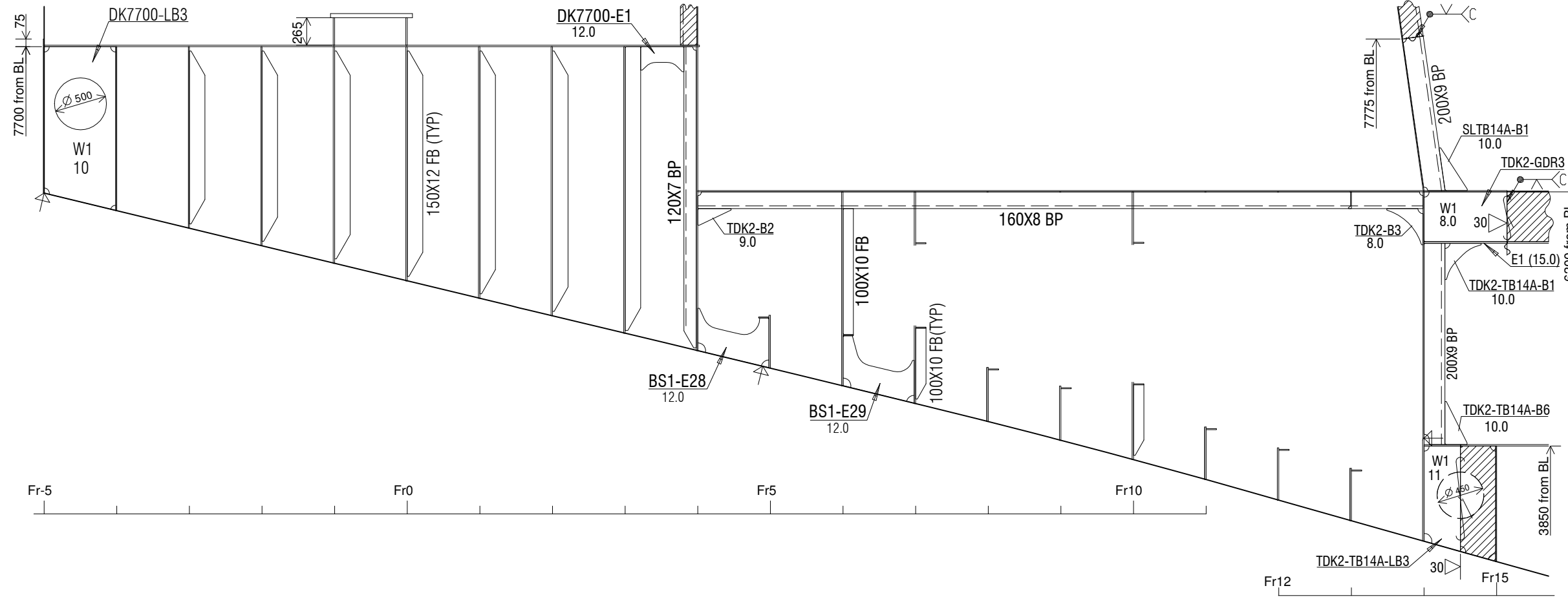
LONG. SEC. AT 1400 OFF CL (P) SB SIMILAR



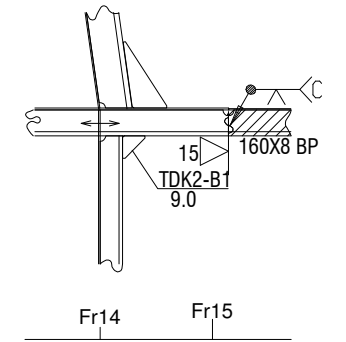


LONG. SECTION AT 2100 OFF CL (P)

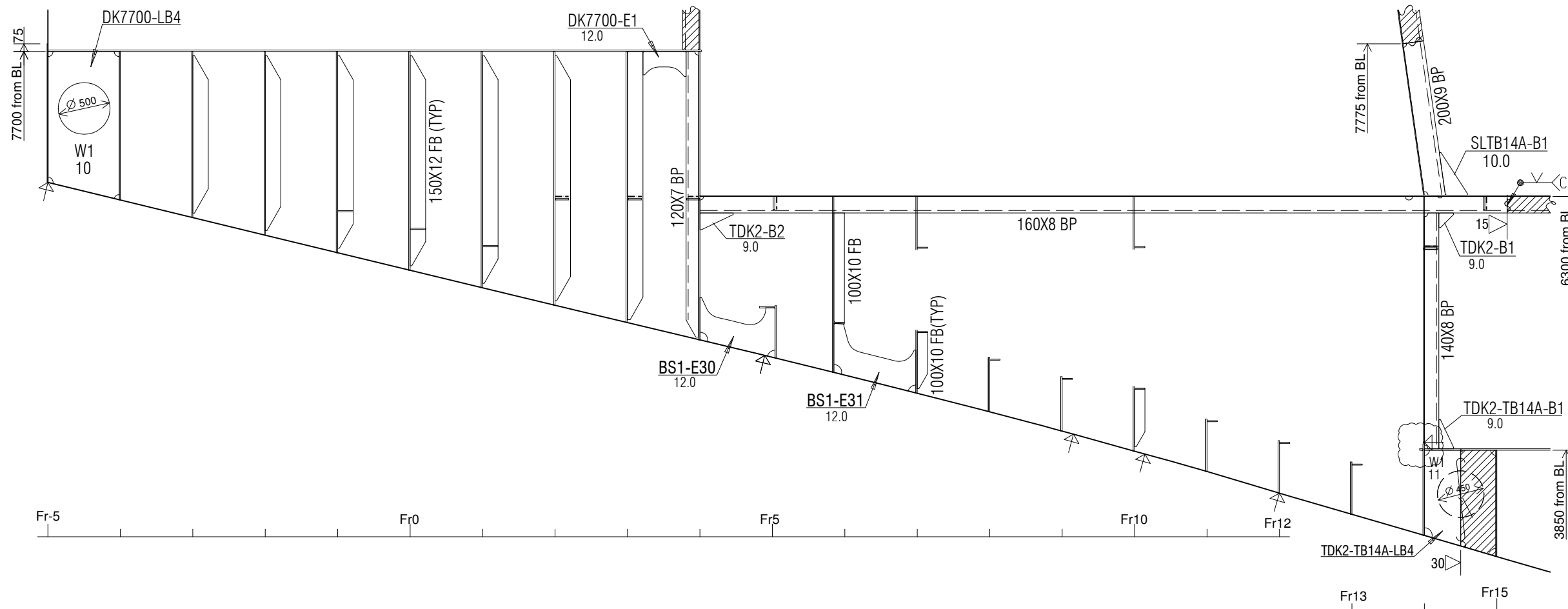
(STBD SIMILAR EXCEPT NOTED)

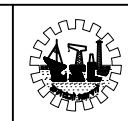


LONG. SECTION AT 2100 OFF CL (S)



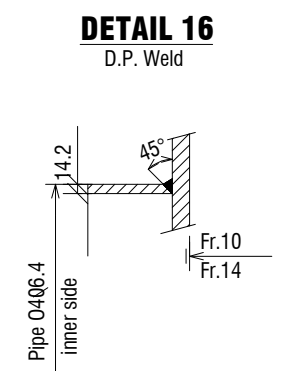
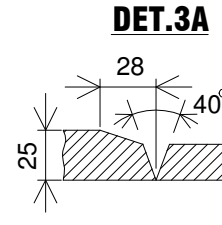
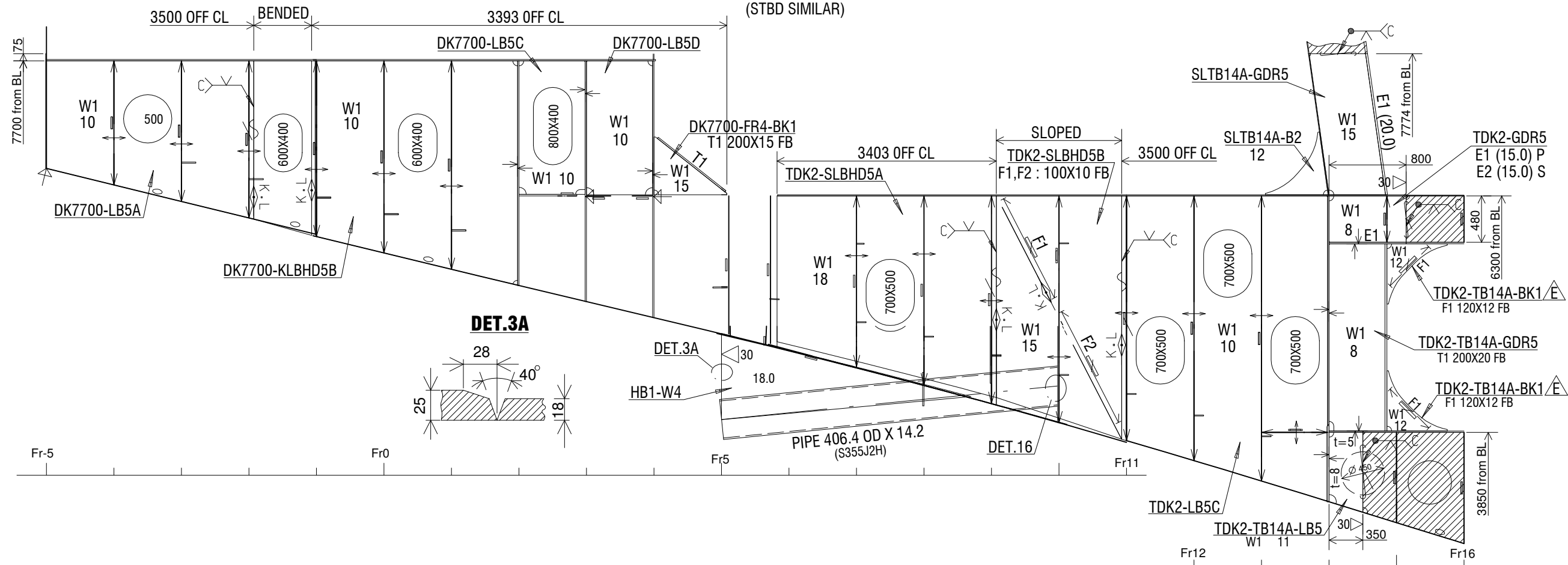
LONG. SECTION AT 2800 OFF CL (P)





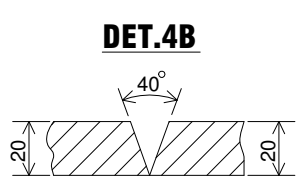
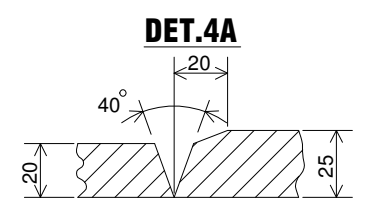
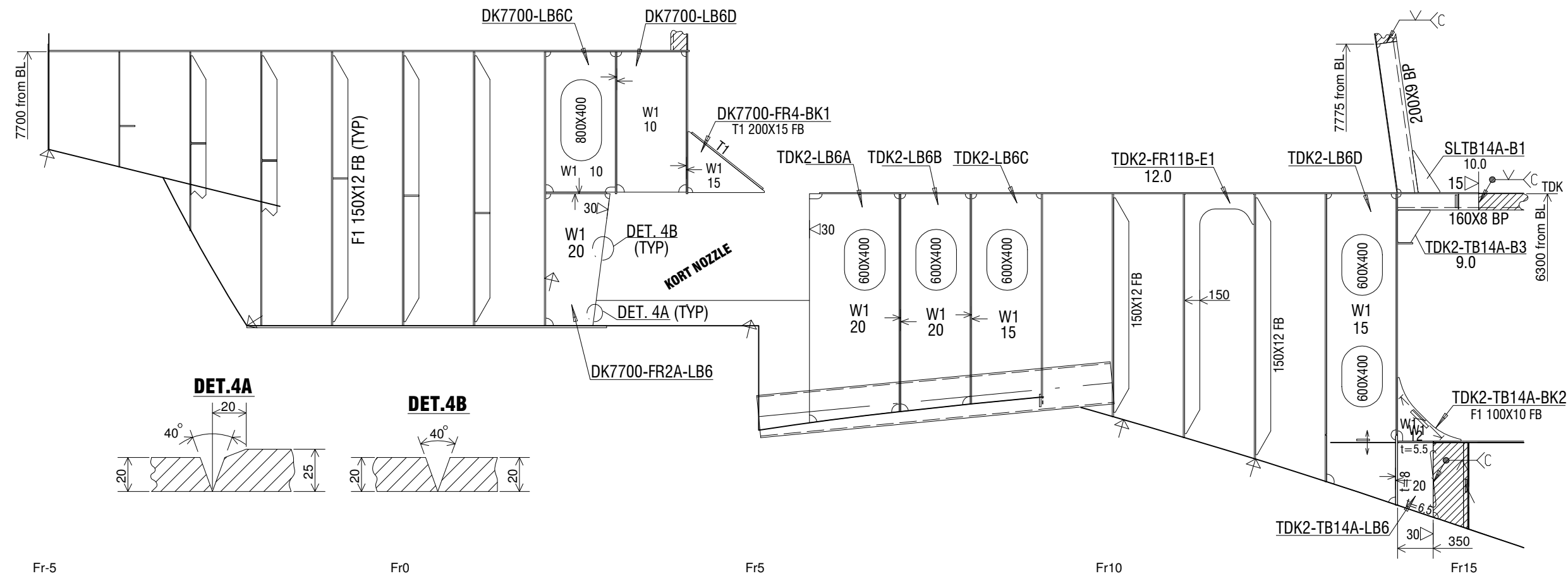
LONG. SECTION 3500/3393/ 3403 OFF CL (P)

(STBD SIMILAR)

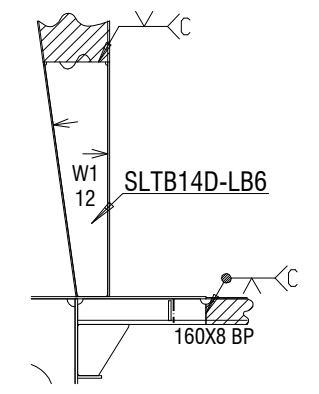


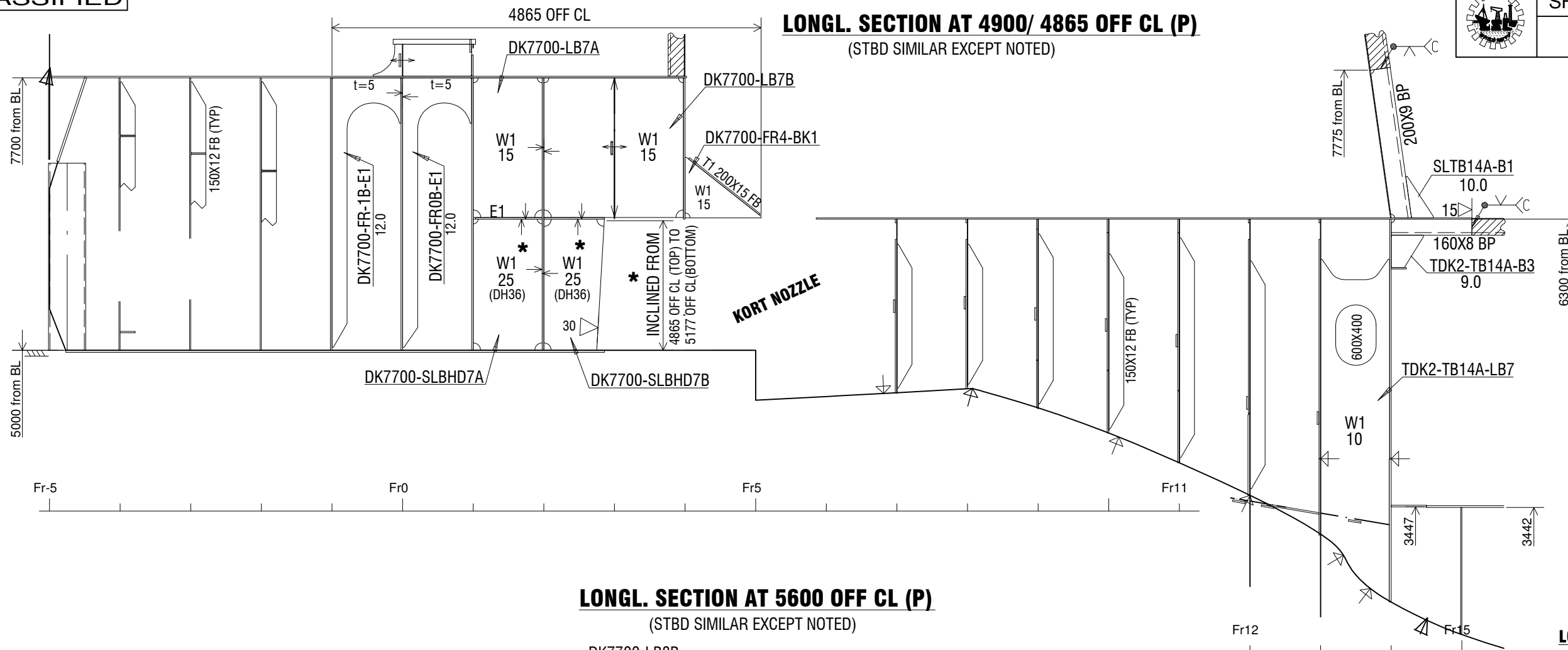
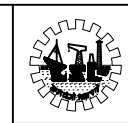
4200/ 4216 OFF CL (PORT)

(STBD SIMILAR EXCEPT NOTED)

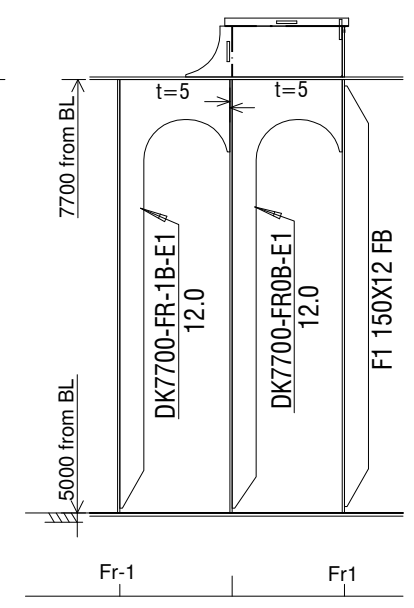


4200 OFF CL (STBD)

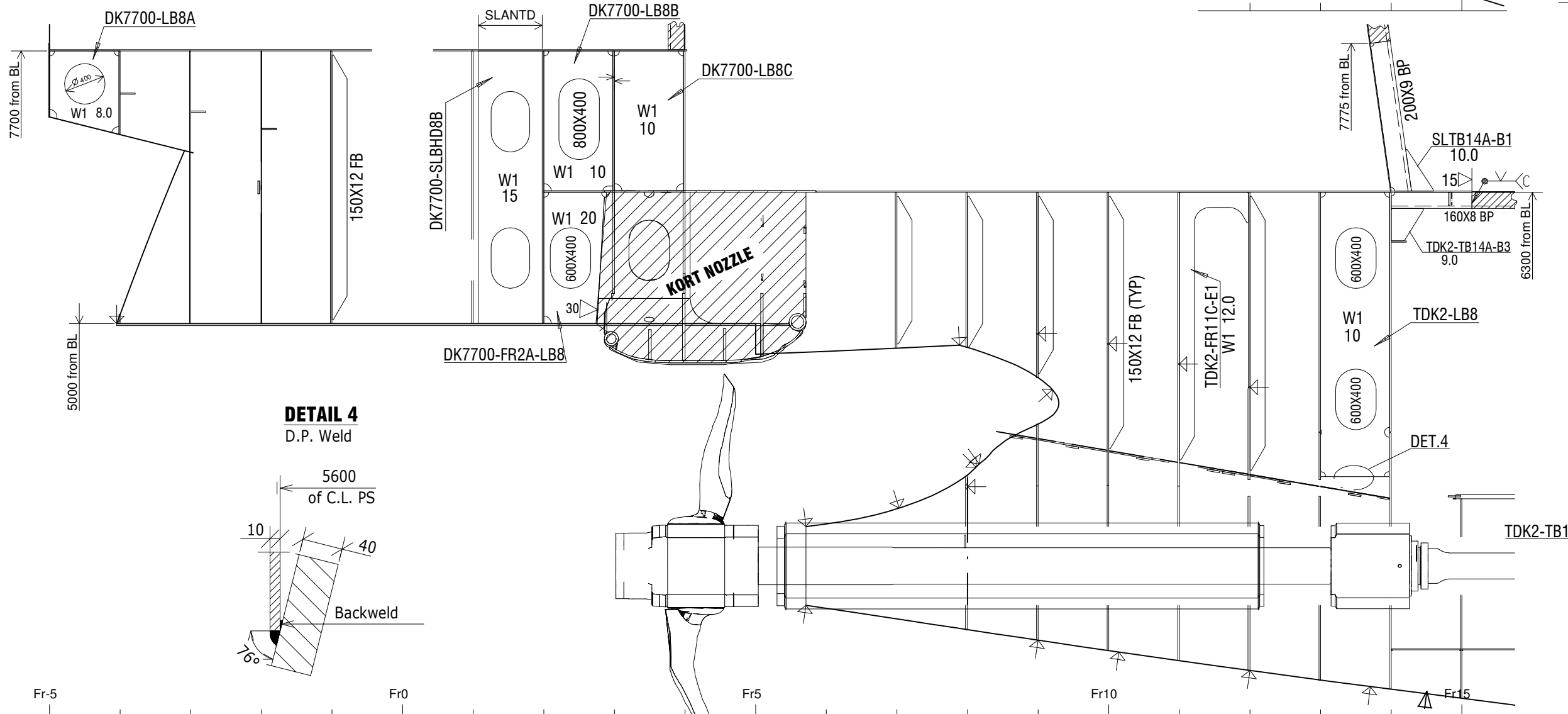




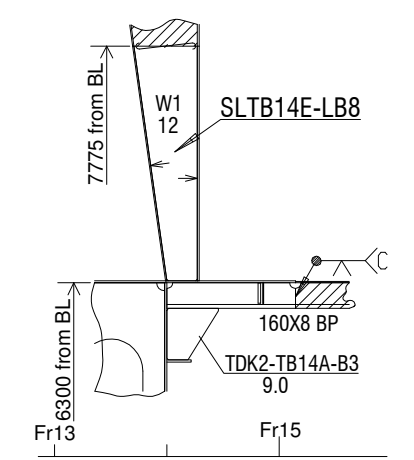
LONG. SECTION AT 4550 OFF CL (P)
 † INDICATES THROAT THICKNESS



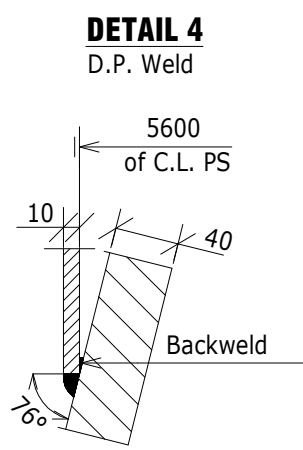
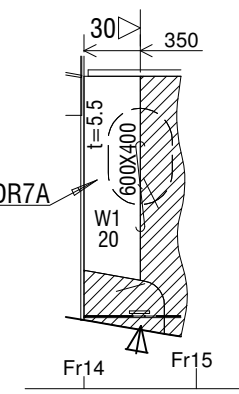
LONG. SECTION AT 5600 OFF CL (P)
 (STBD SIMILAR EXCEPT NOTED)

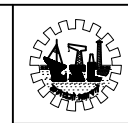


LONG. SECTION AT 5600 OFF CL (S)

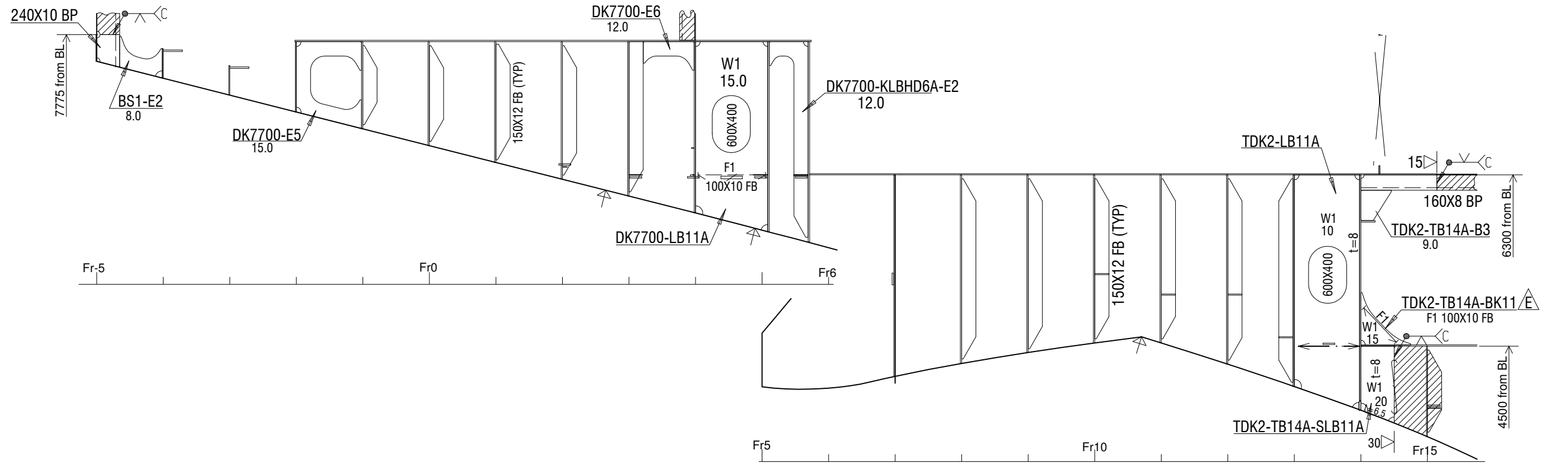


LONG. SEC. AT 5180 OFF CL (P)
 (STBD SIMILAR)



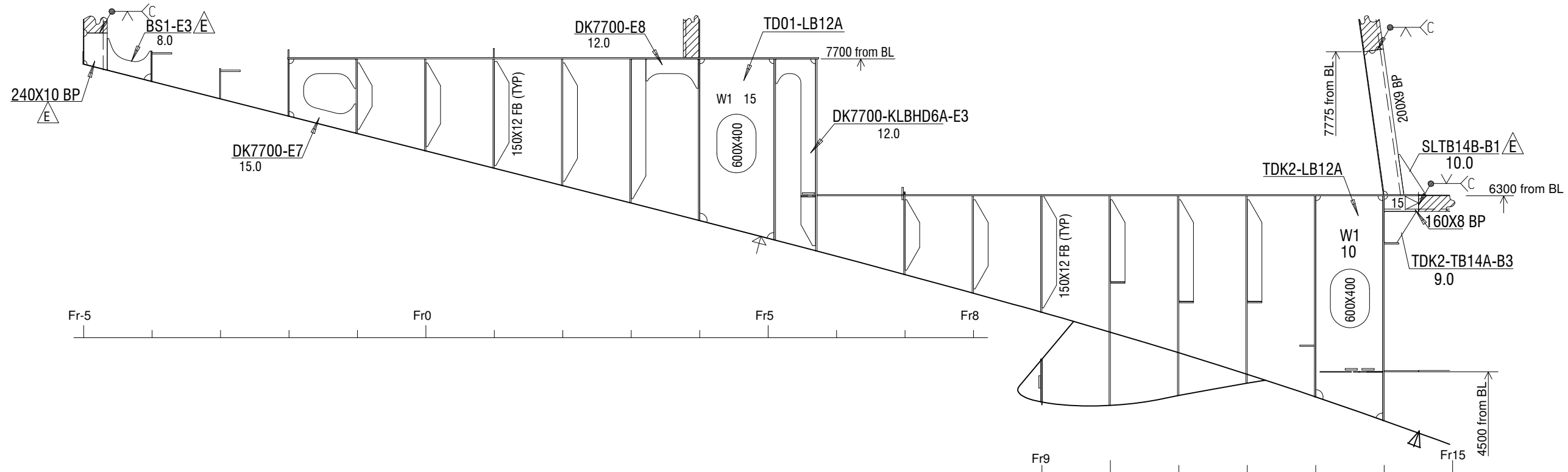


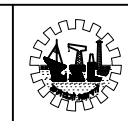
LONGL. SECTION AT 7550 OFF CL (P)
(STBD SIMILAR)



*t INDICATES THROAT THICKNESS

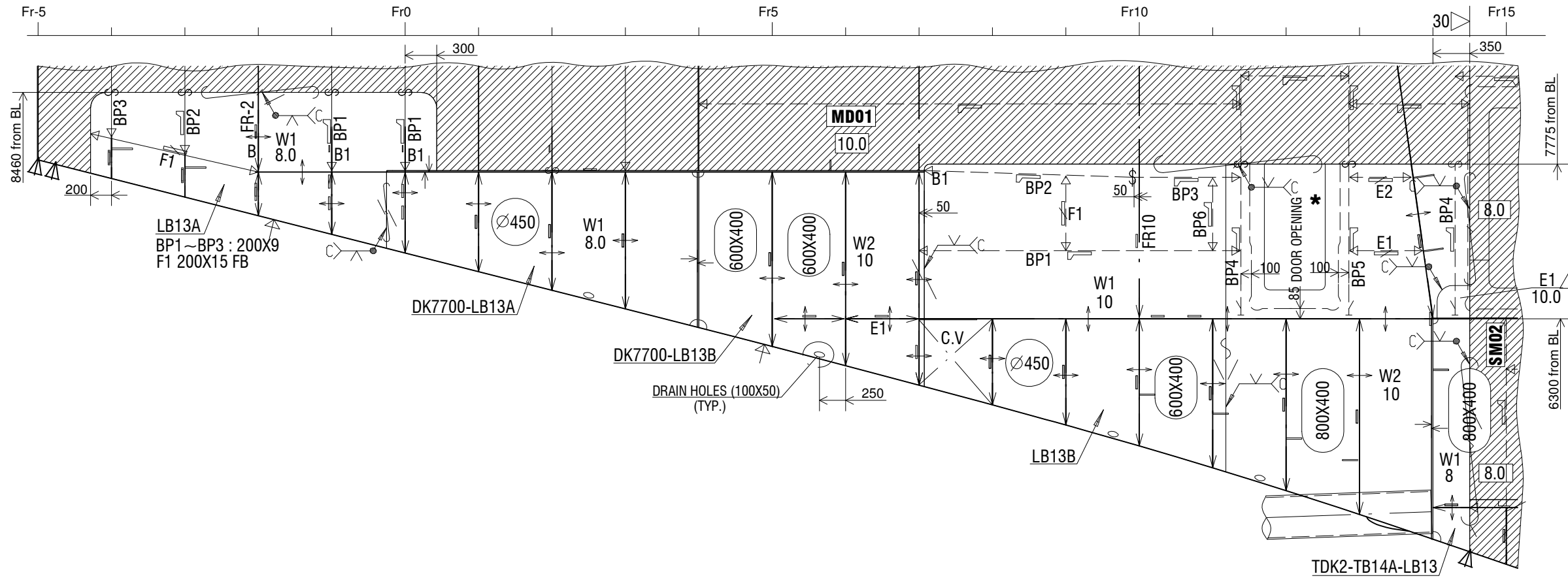
LONGL. SECTION AT 8200 OFF CL (P)
(STBD SIMILAR)





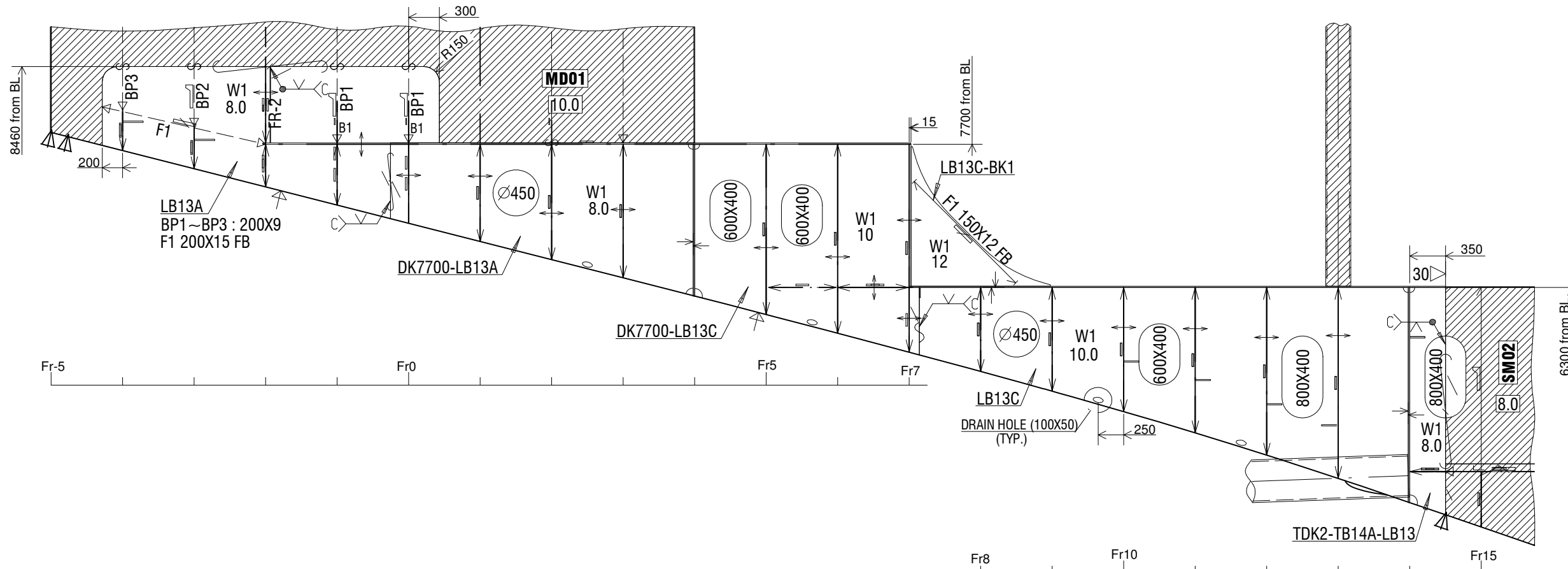
LONGL. SECTION AT 8900 OFF CL (P)

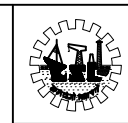
STIFFENERS 140X8 BP (EXCEPT NOTED)



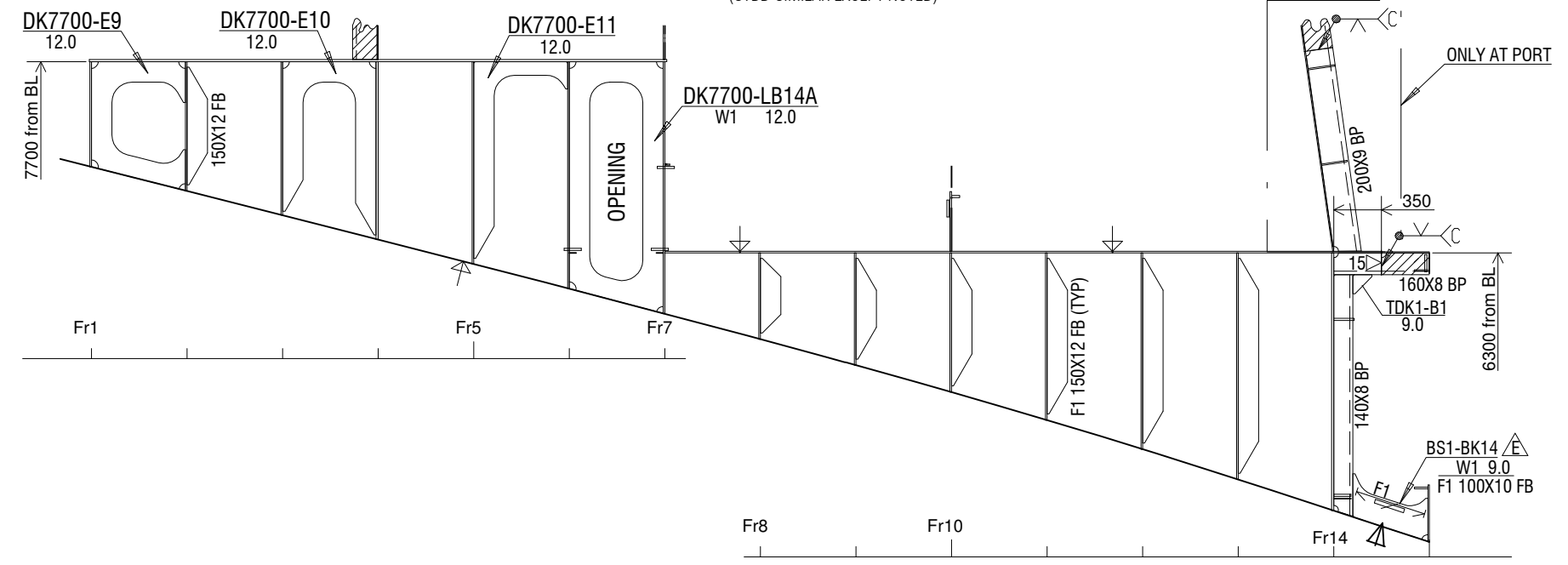
* DOOR OPENING TO BE KEPT PENDING AND STIFFENERS AROUND OPENING TO BE TACK WELDED. UNDERSIZE CAN BE CUT AS SHOWN

LONGL. SECTION AT 8900 OFF CL (S)

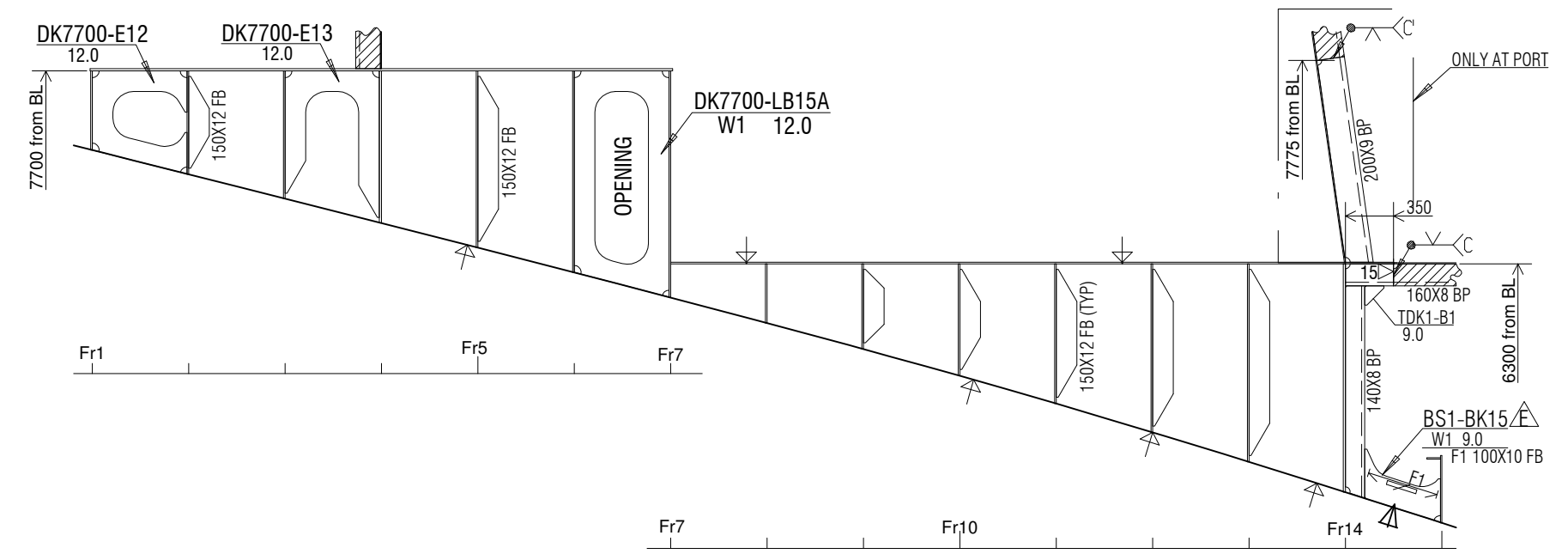




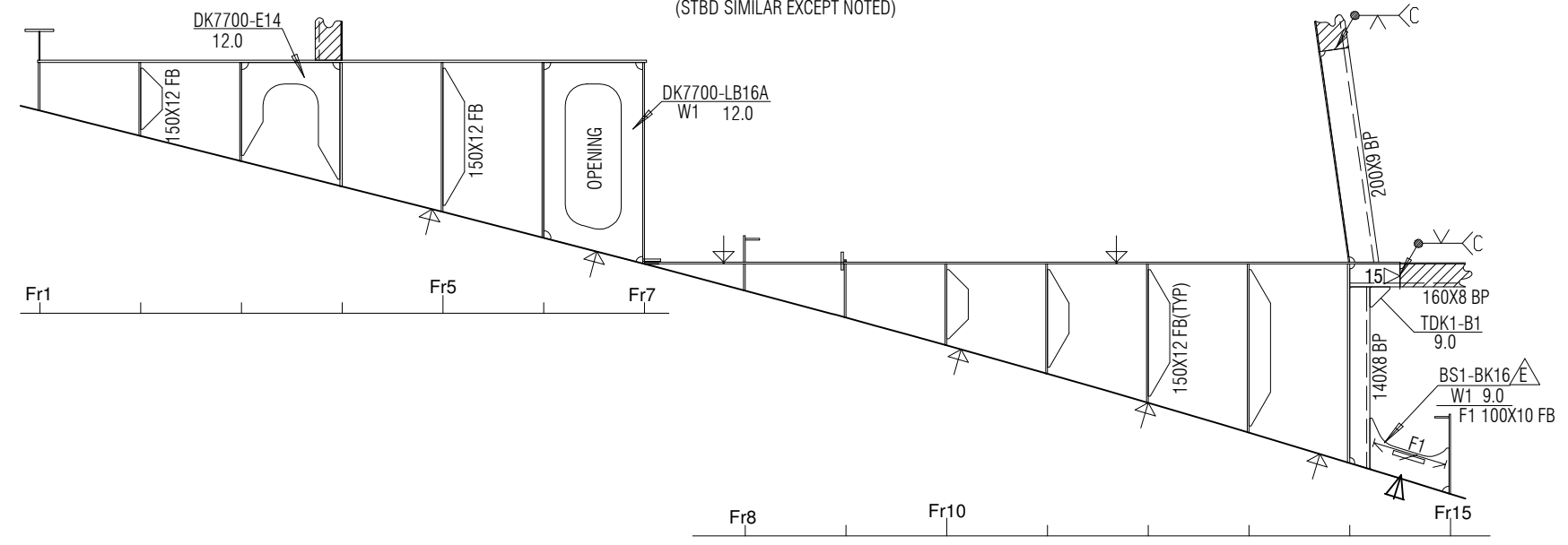
LONGL. SECTION AT 9600 OF CL (P)
(STBD SIMILAR EXCEPT NOTED)



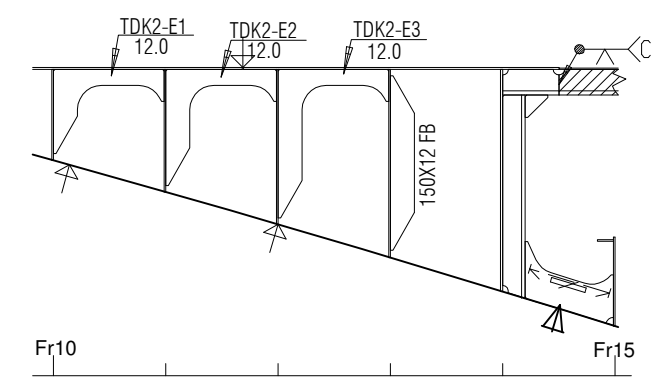
LONGL. SECTION 10300 OFF CL (P)
(STBD SIMILAR EXCEPT NOTED)

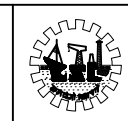


LONGL. SECTION 11075 OFF CL (P)
(STBD SIMILAR EXCEPT NOTED)

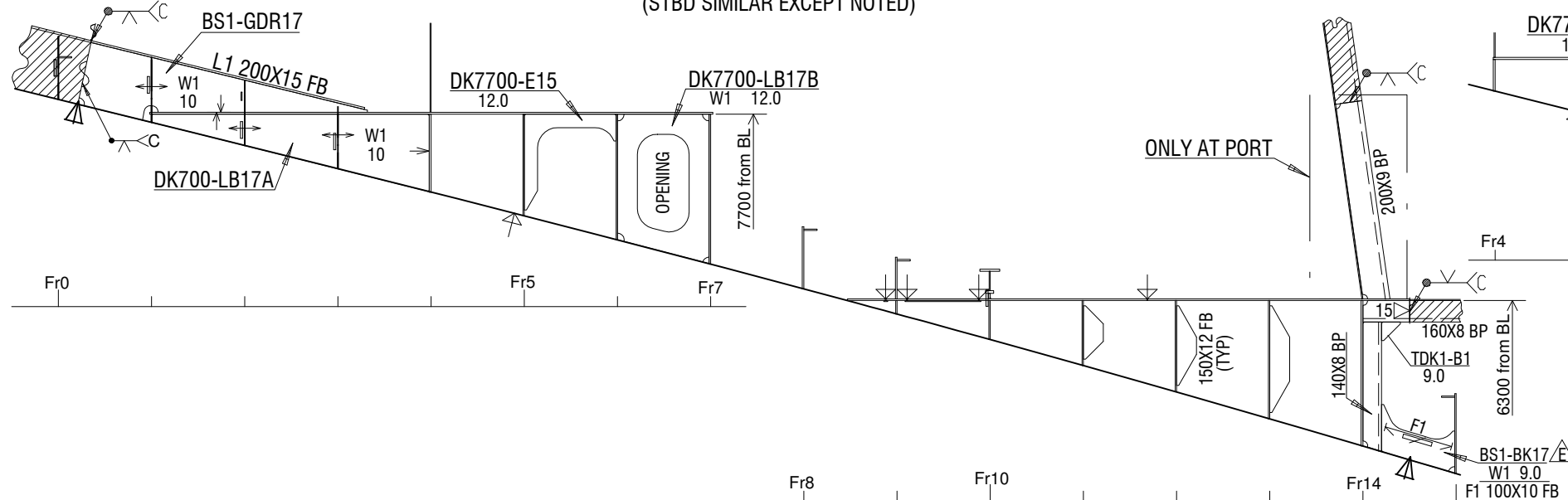


LONGL. SECTION 11075 OFF CL (S)

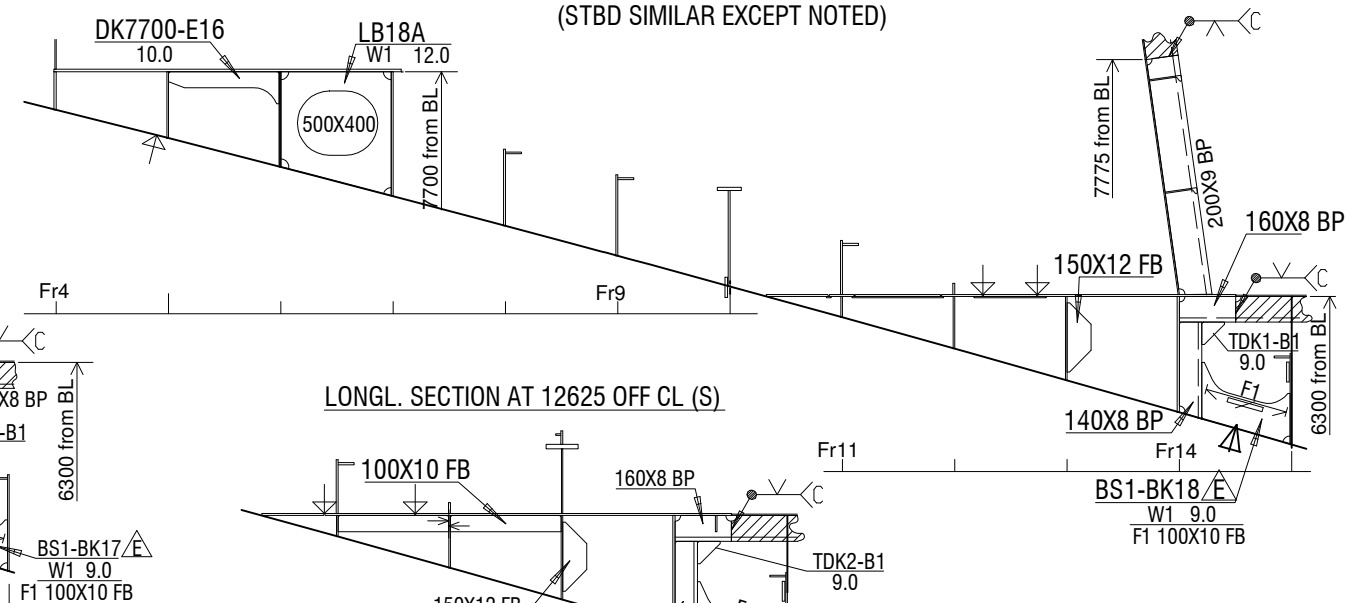




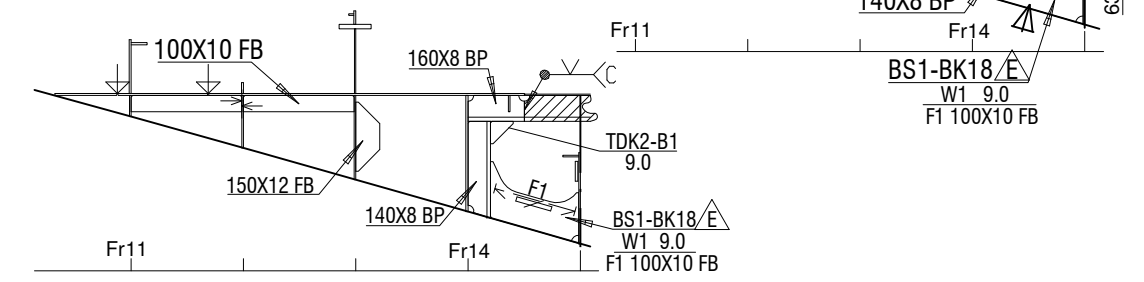
LONGL. SECTION AT 11850 OFF CL (P)
(STBD SIMILAR EXCEPT NOTED)



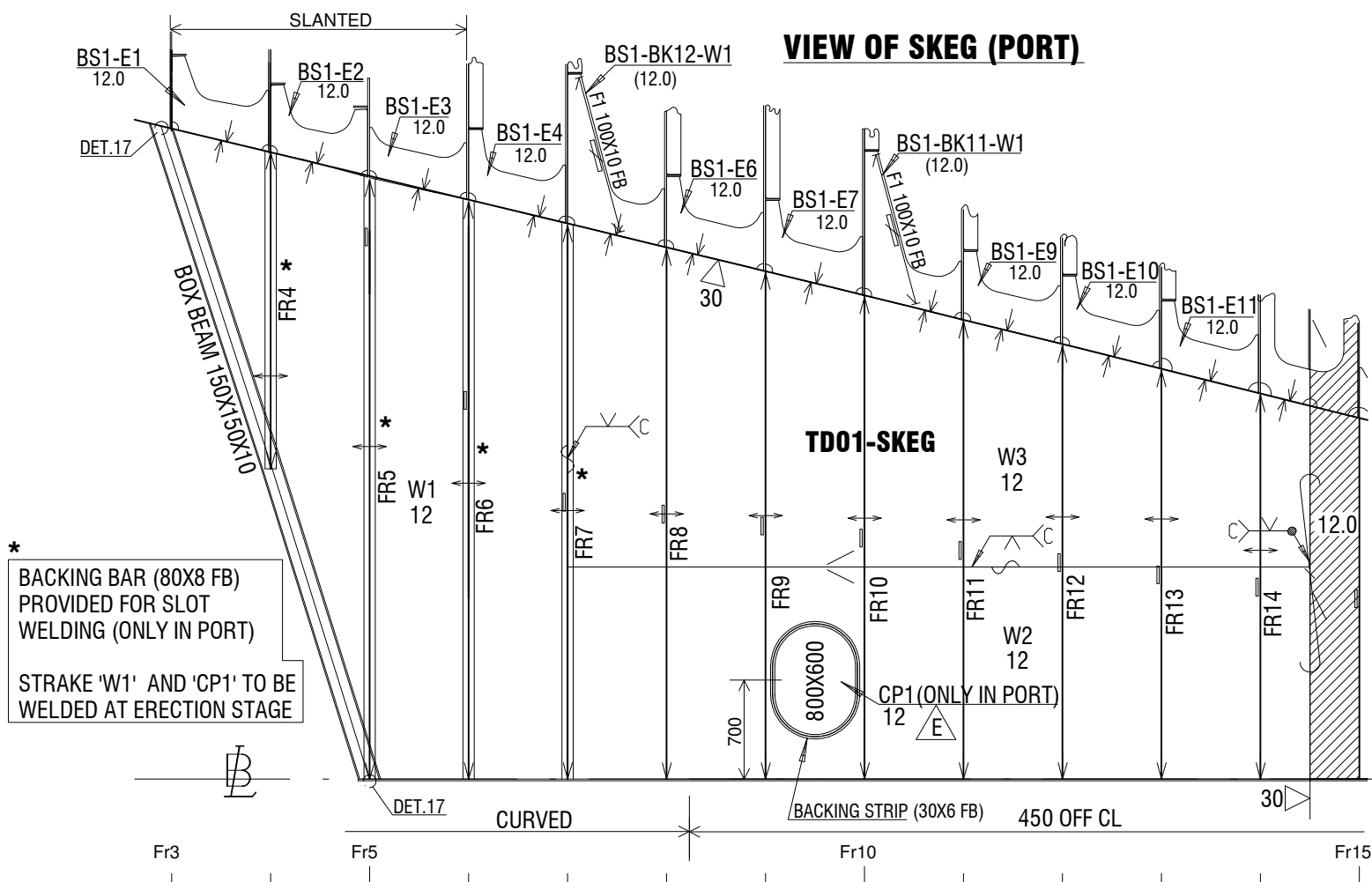
LONGL. SECTION AT 12625 OFF CL (P)
(STBD SIMILAR EXCEPT NOTED)



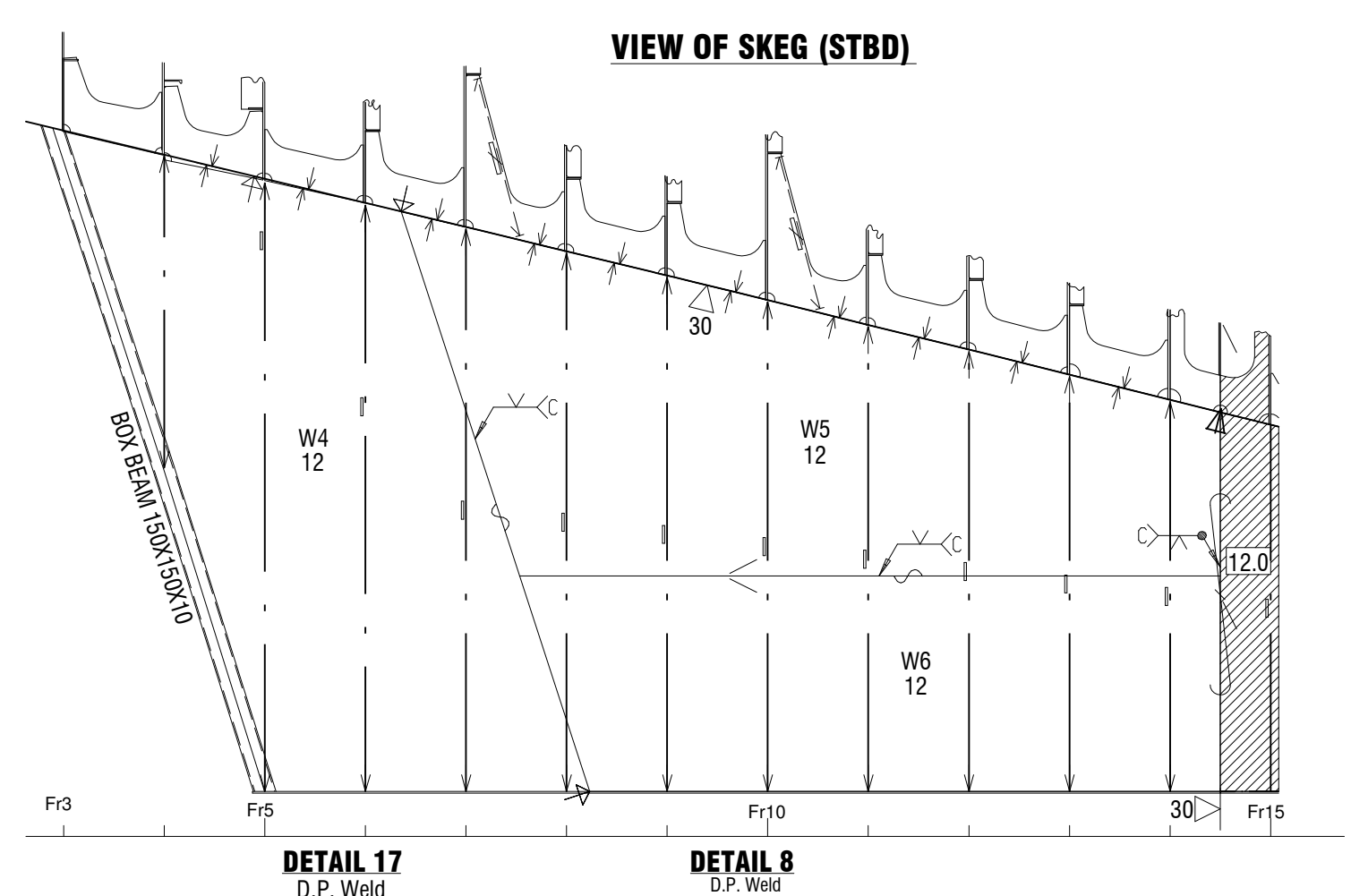
LONGL. SECTION AT 12625 OFF CL (S)



VIEW OF SKEG (PORT)

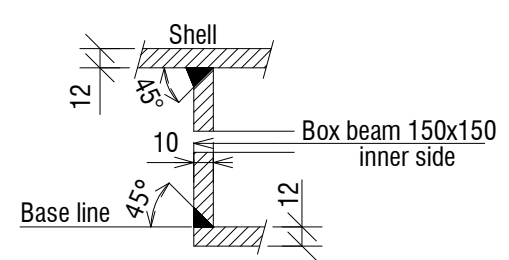


VIEW OF SKEG (STBD)

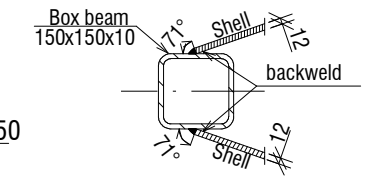


* BACKING BAR (80X8 FB) PROVIDED FOR SLOT WELDING (ONLY IN PORT)
STRAKE 'W1' AND 'CP1' TO BE WELDED AT ERECTION STAGE

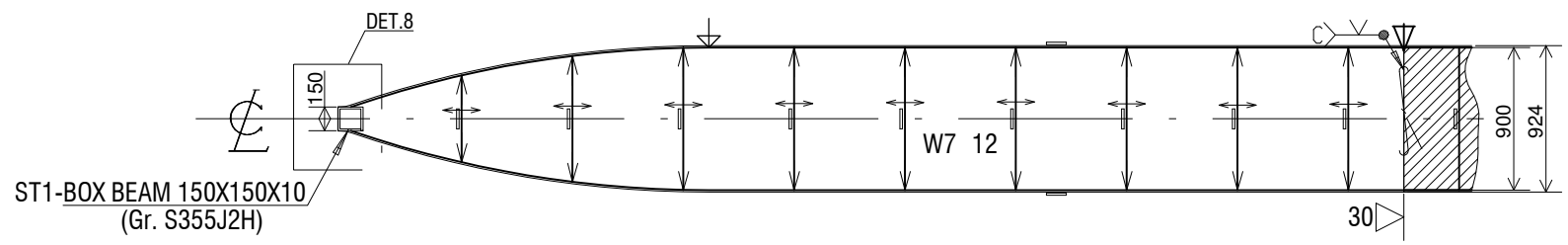
DETAIL 17
D.P. Weld



DETAIL 8
D.P. Weld



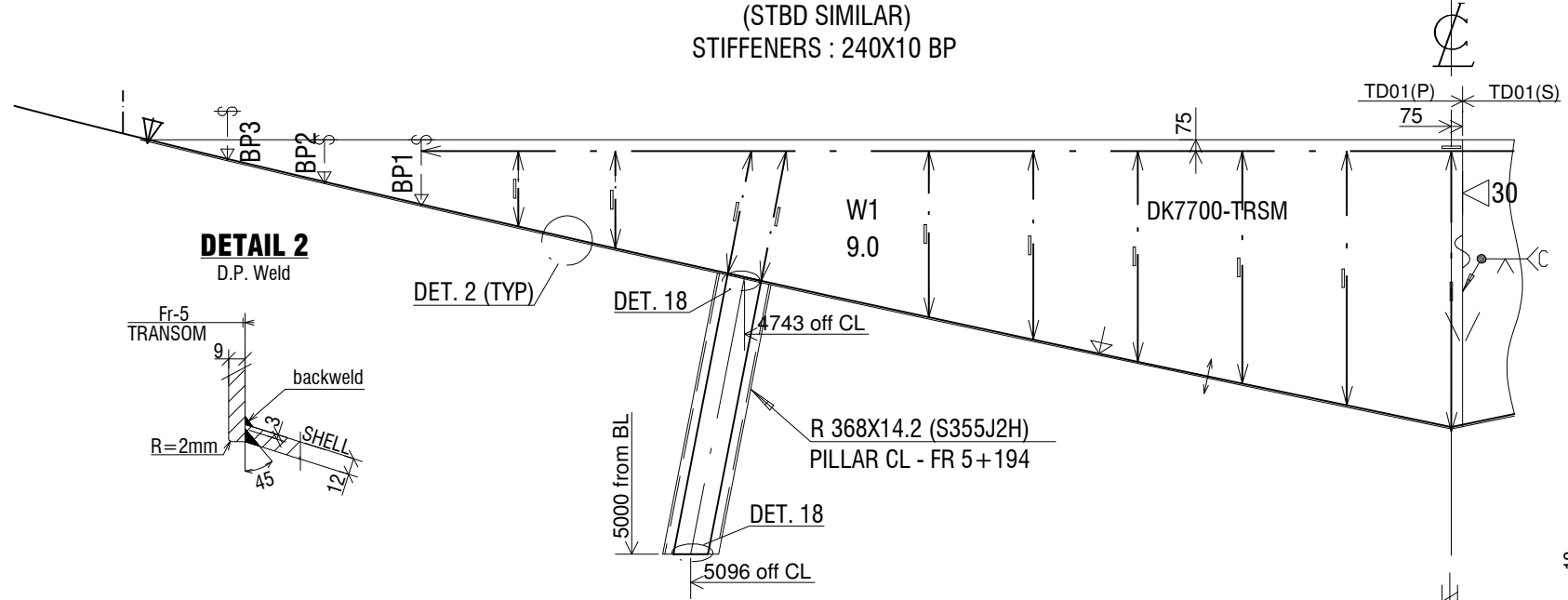
NOTE :
INSPECTION AND PAINTING
INSIDE SKEG TO BE DONE
BEFORE ERECTION



TRANSOM AT FRAME -5 (P)

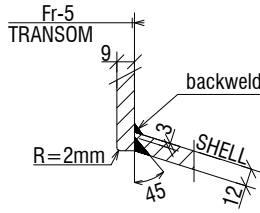
(STBD SIMILAR)

STIFFENERS : 240X10 BP



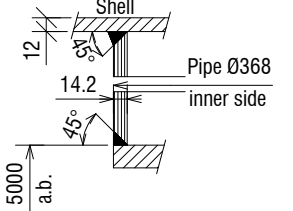
DETAIL 2

D.P. Weld



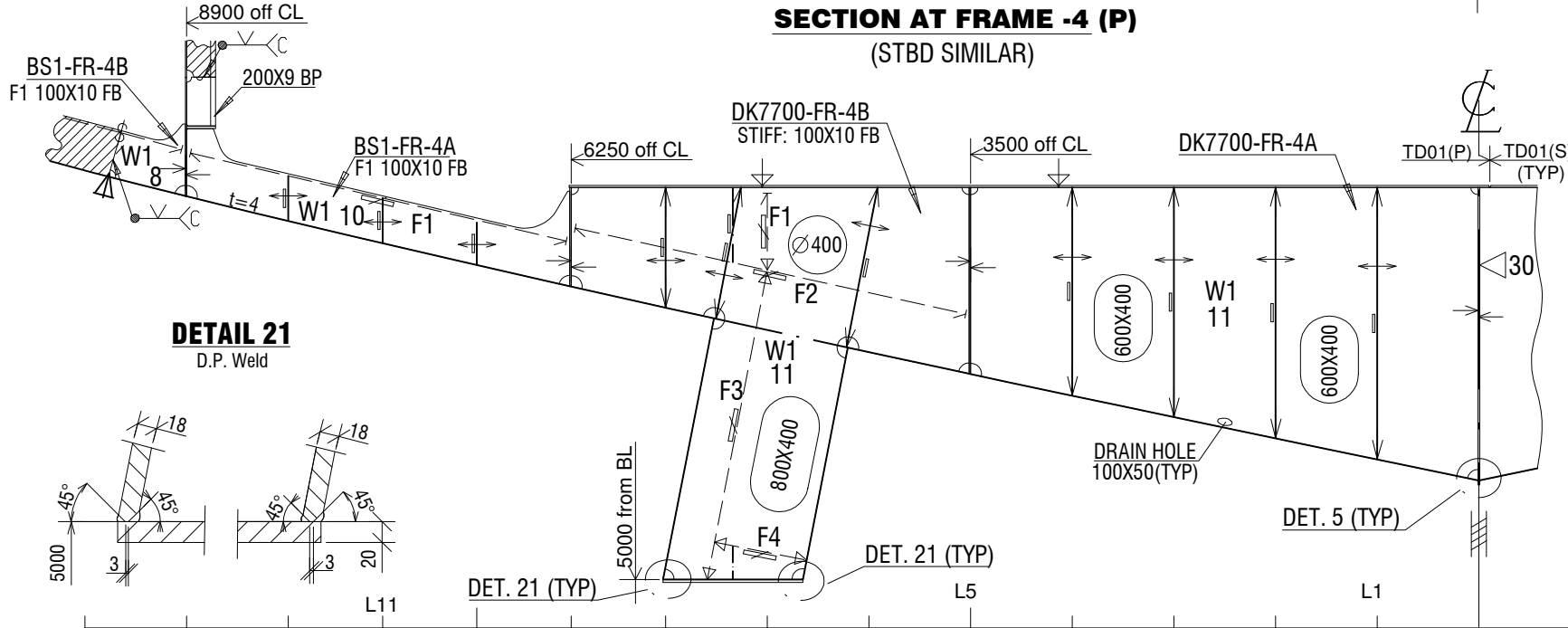
DETAIL 18

D.P. Weld



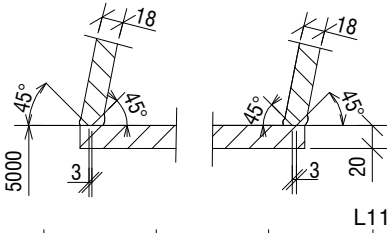
SECTION AT FRAME -4 (P)

(STBD SIMILAR)



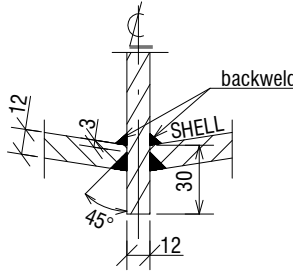
DETAIL 21

D.P. Weld



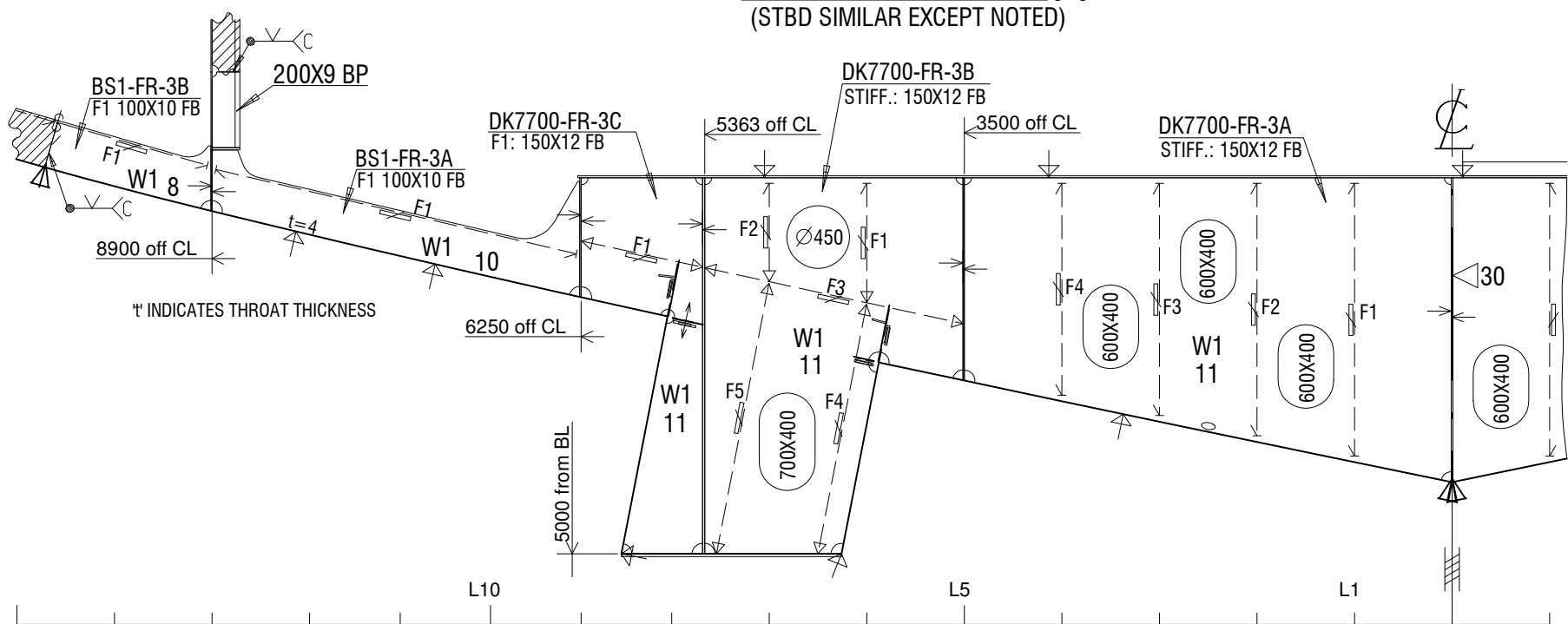
DETAIL 5

D.P. Weld



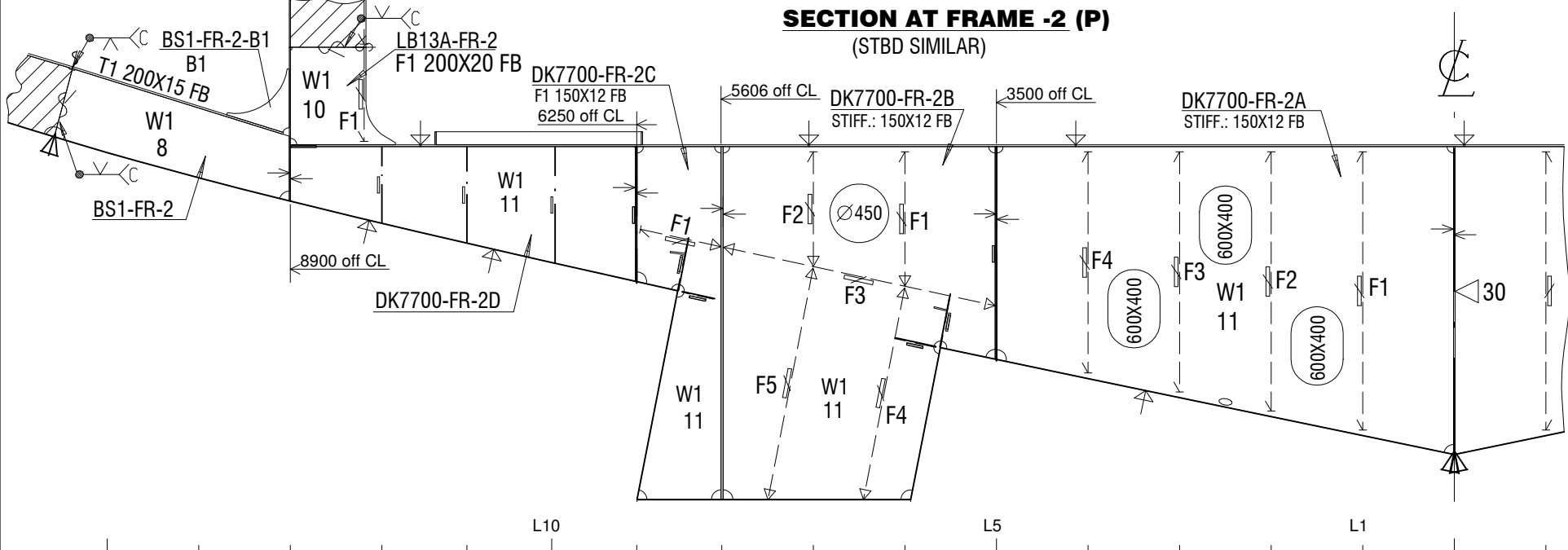
SECTION AT FRAME -3 (P)

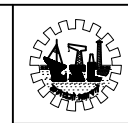
(STBD SIMILAR EXCEPT NOTED)



SECTION AT FRAME -2 (P)

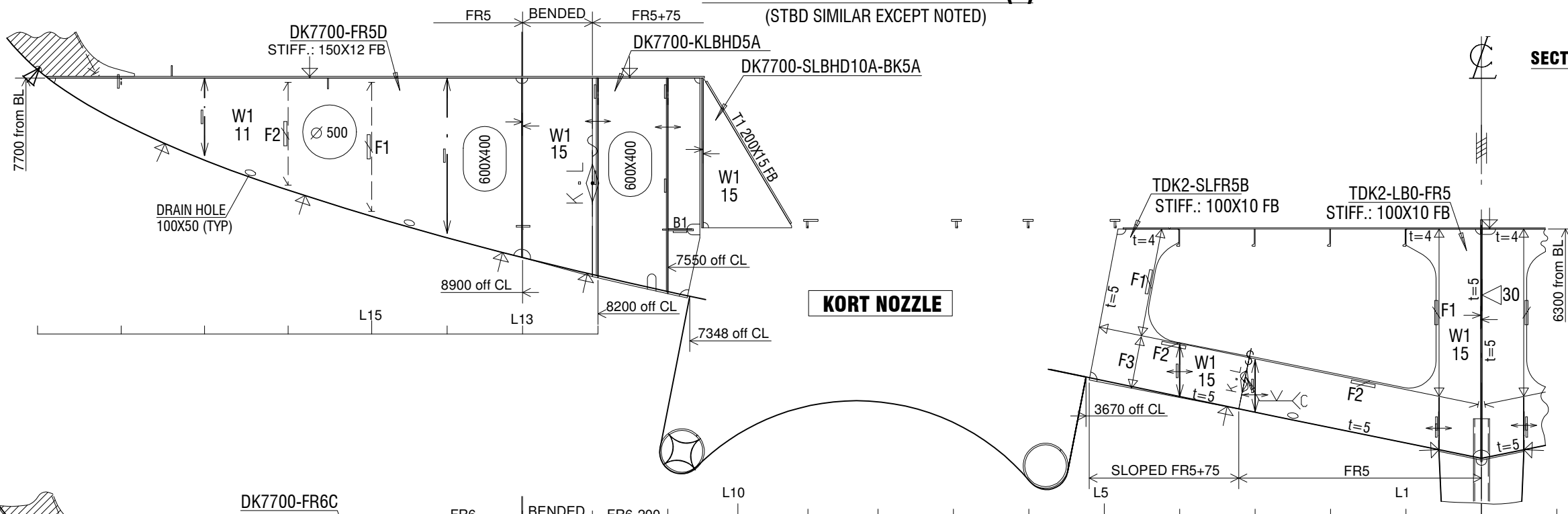
(STBD SIMILAR)



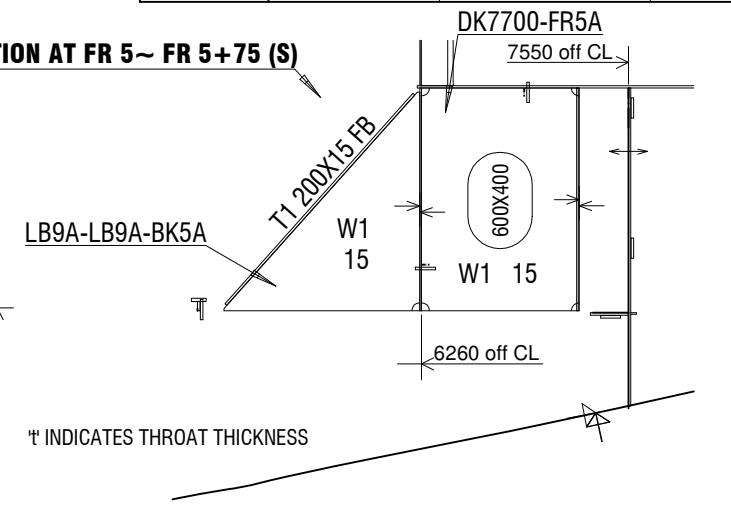


SECTION AT FR 5~ FR 5+75 (P)

(STBD SIMILAR EXCEPT NOTED)

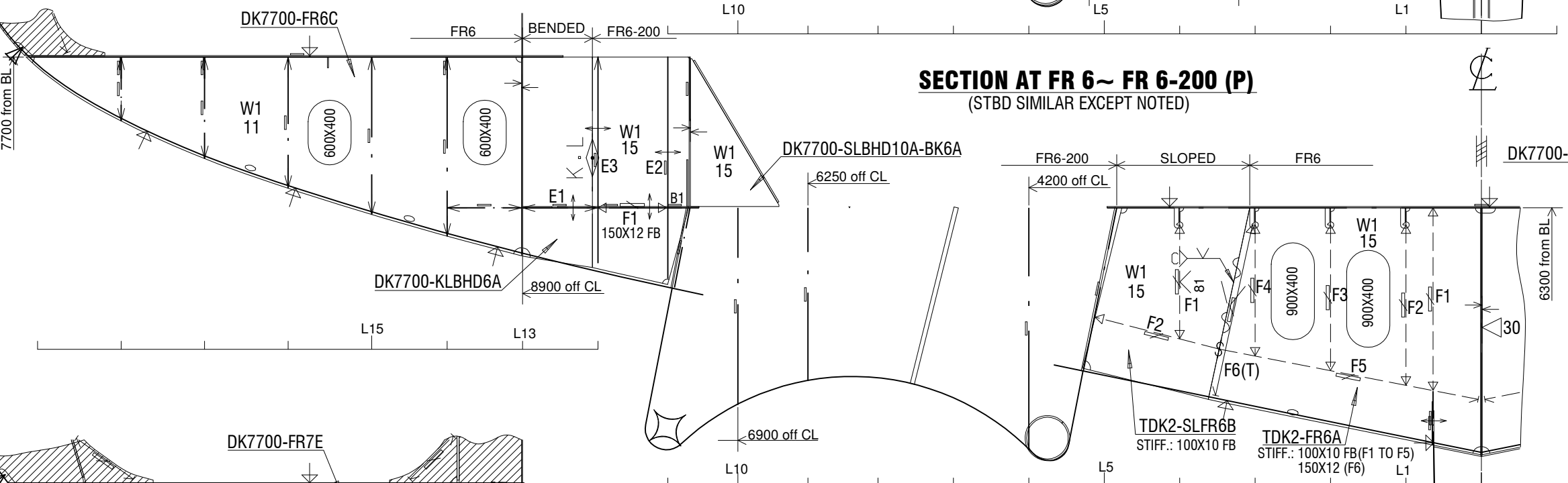


SECTION AT FR 5~ FR 5+75 (S)

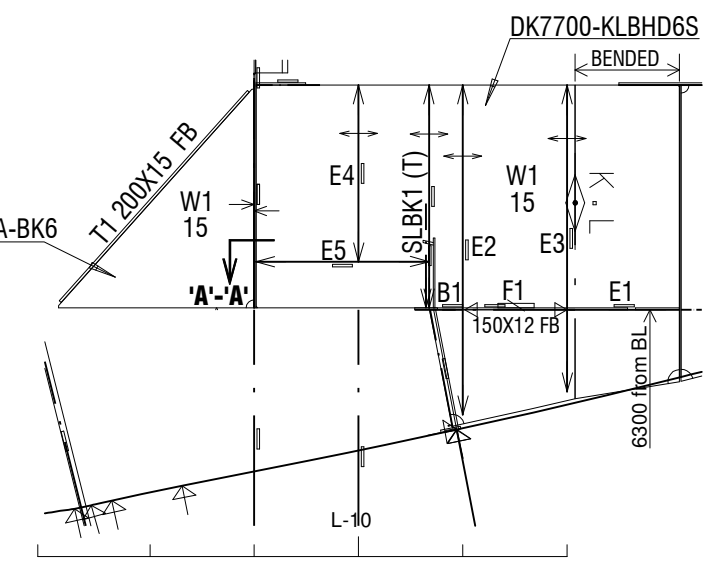


SECTION AT FR 6~ FR 6-200 (P)

(STBD SIMILAR EXCEPT NOTED)

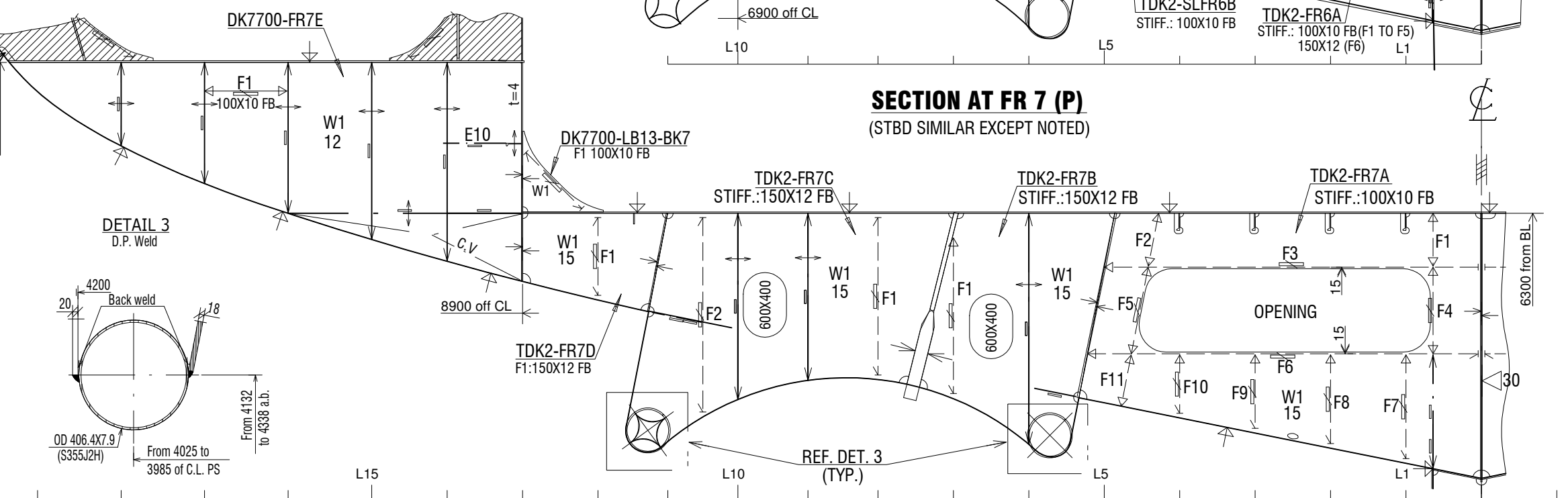


SECTION AT FR 6 ~ FR 6-200 (S)

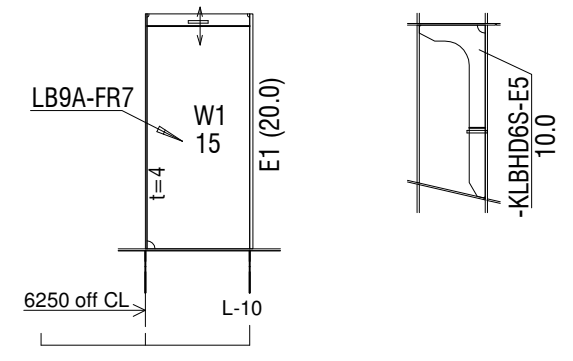


SECTION AT FR 7 (P)

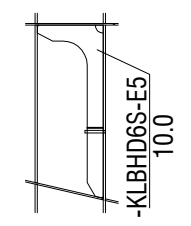
(STBD SIMILAR EXCEPT NOTED)



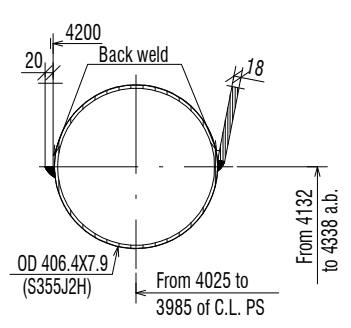
SECTION AT FR 7 (S)

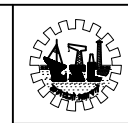


SEC. 'A'-A'

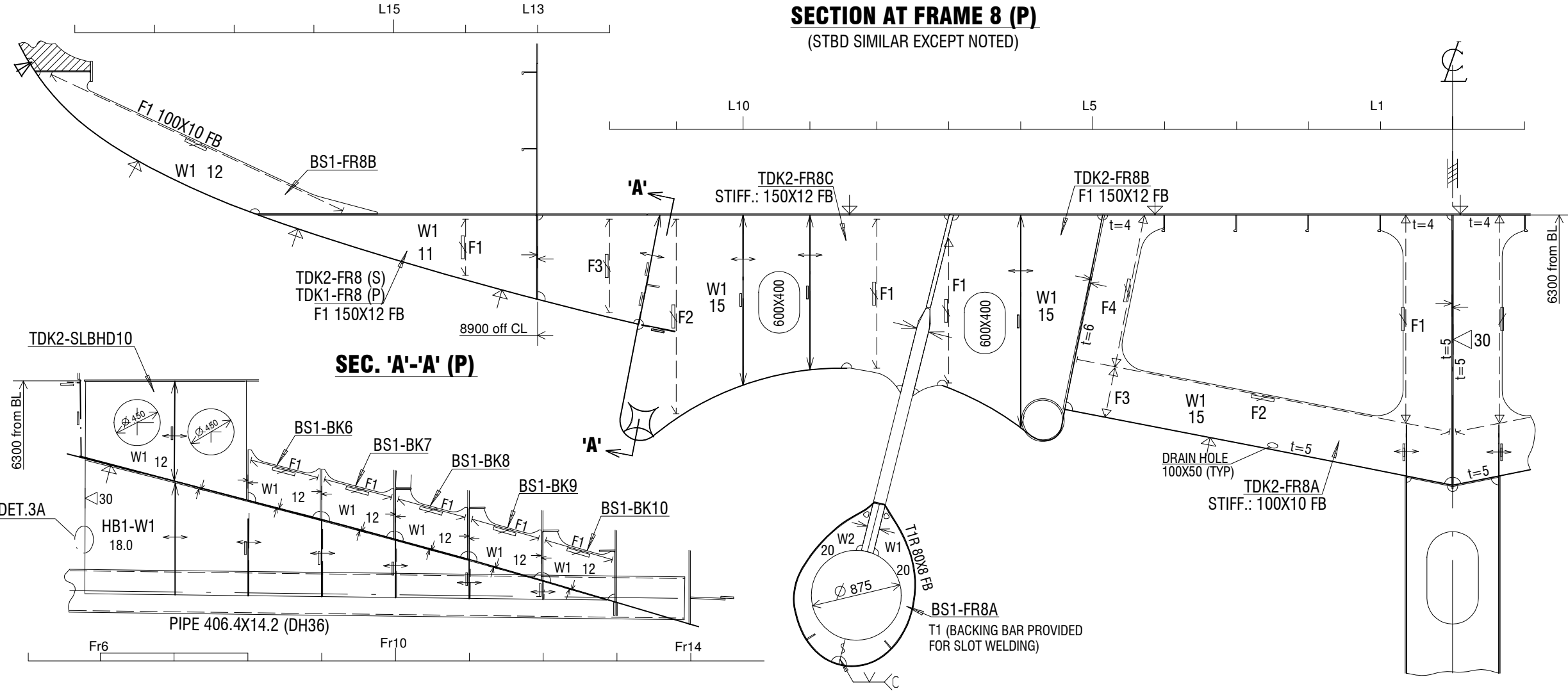


DETAIL 3
D.P. Weld

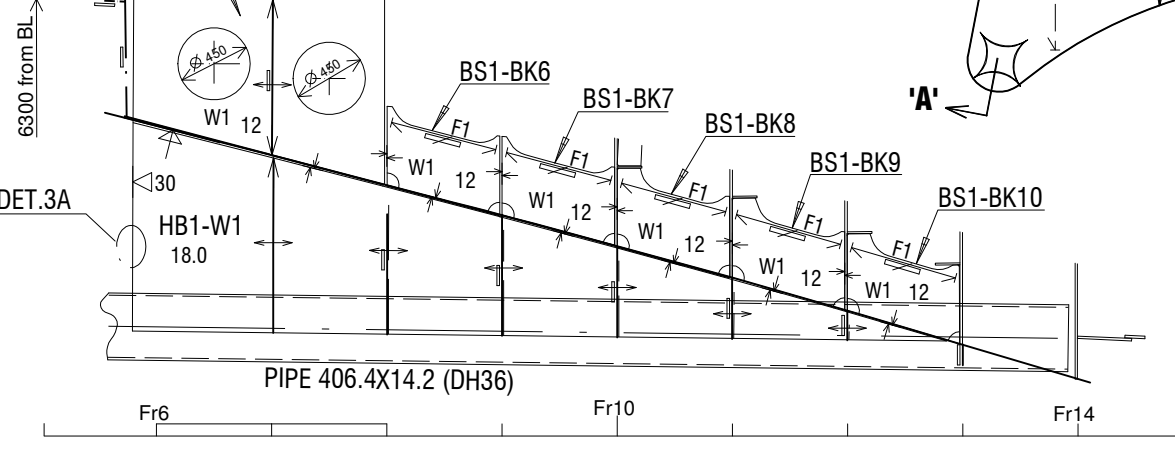




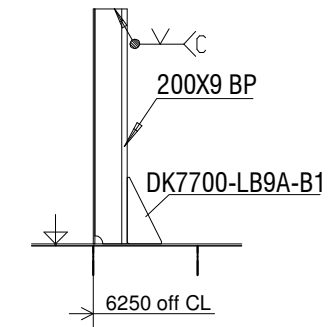
SECTION AT FRAME 8 (P)
(STBD SIMILAR EXCEPT NOTED)



SEC. 'A'-'A' (P)

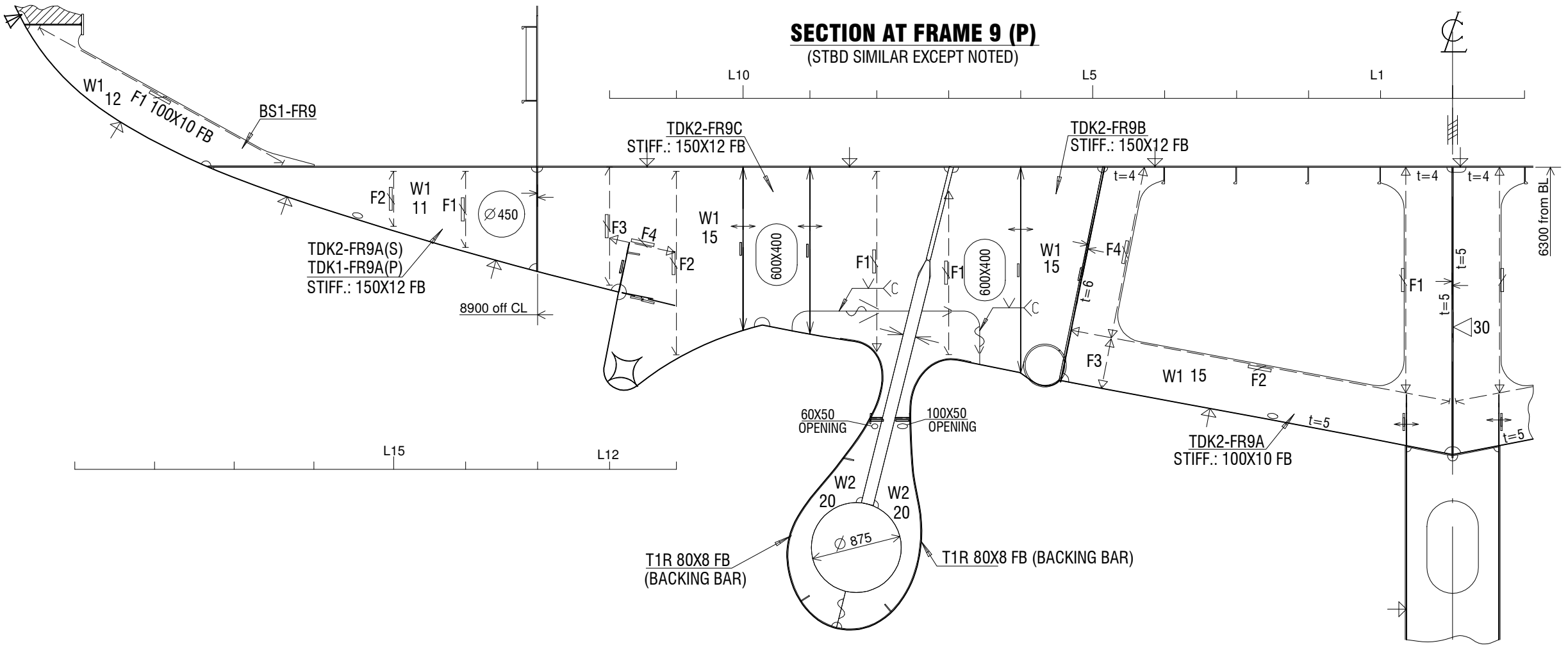


SECTION AT FR 8 (S)

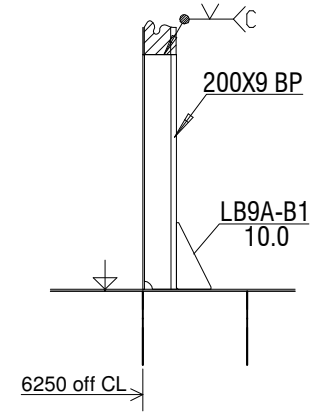


't' INDICATES THROAT THICKNESS

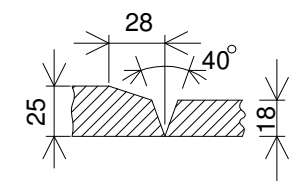
SECTION AT FRAME 9 (P)
(STBD SIMILAR EXCEPT NOTED)

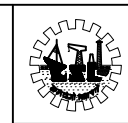


SECTION AT FR 9 (S)

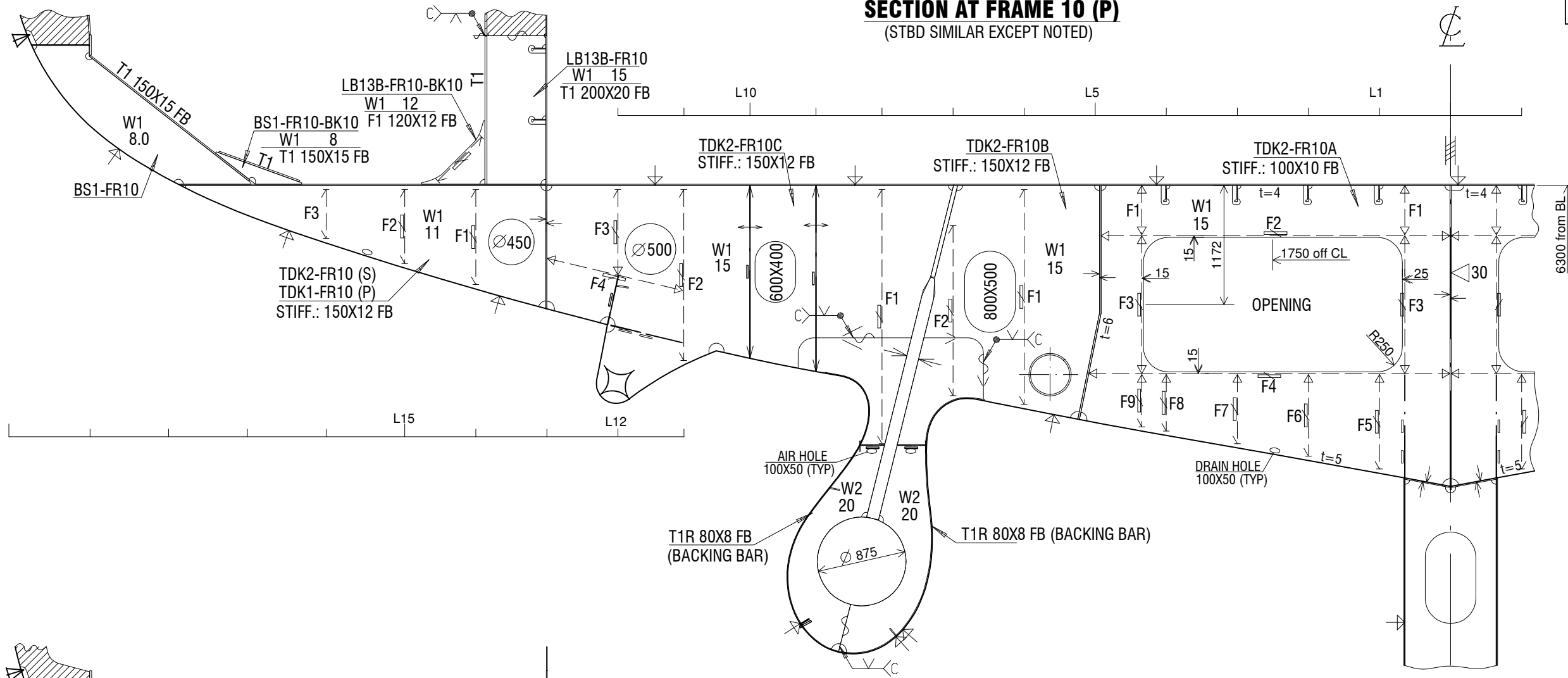


DET.3A

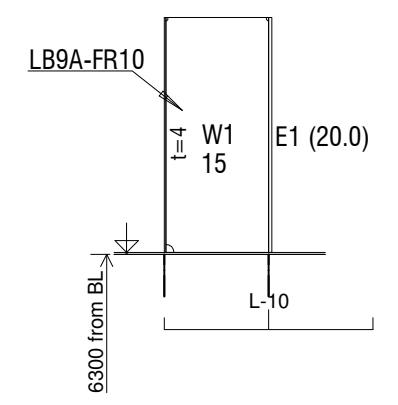




SECTION AT FRAME 10 (P)
(STBD SIMILAR EXCEPT NOTED)

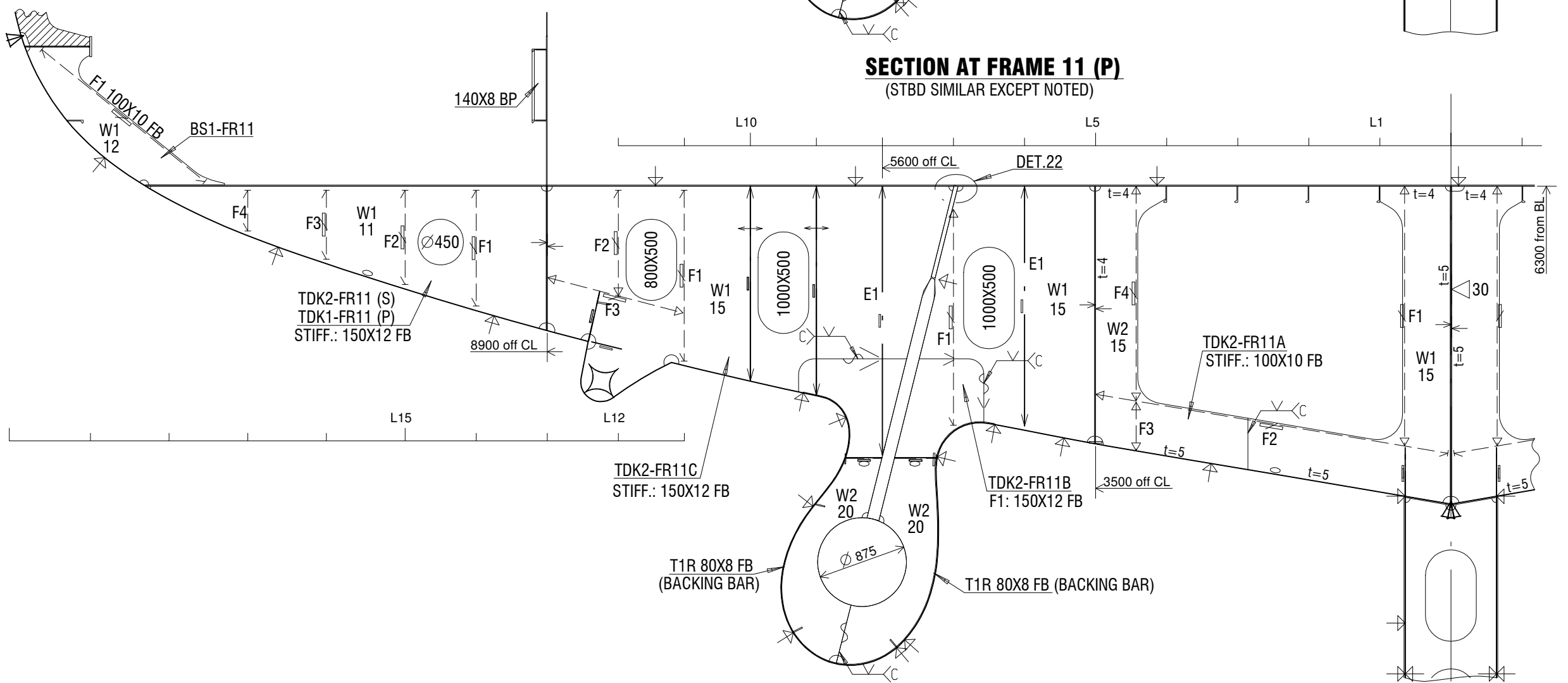


SECTION AT FRAME 10 (S)

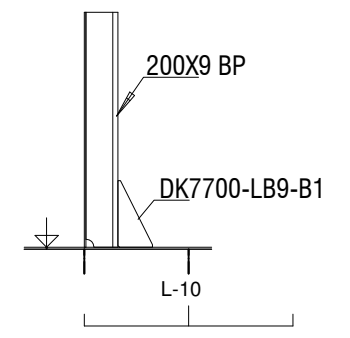


't' INDICATES THROAT THICKNESS

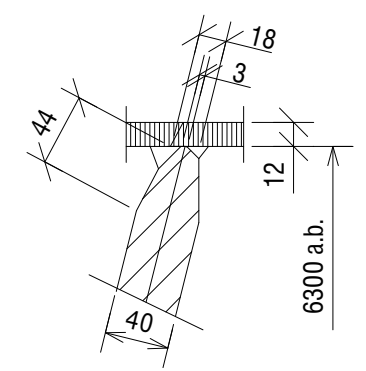
SECTION AT FRAME 11 (P)
(STBD SIMILAR EXCEPT NOTED)

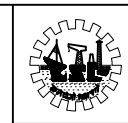


SECTION AT FRAME 11 (S)

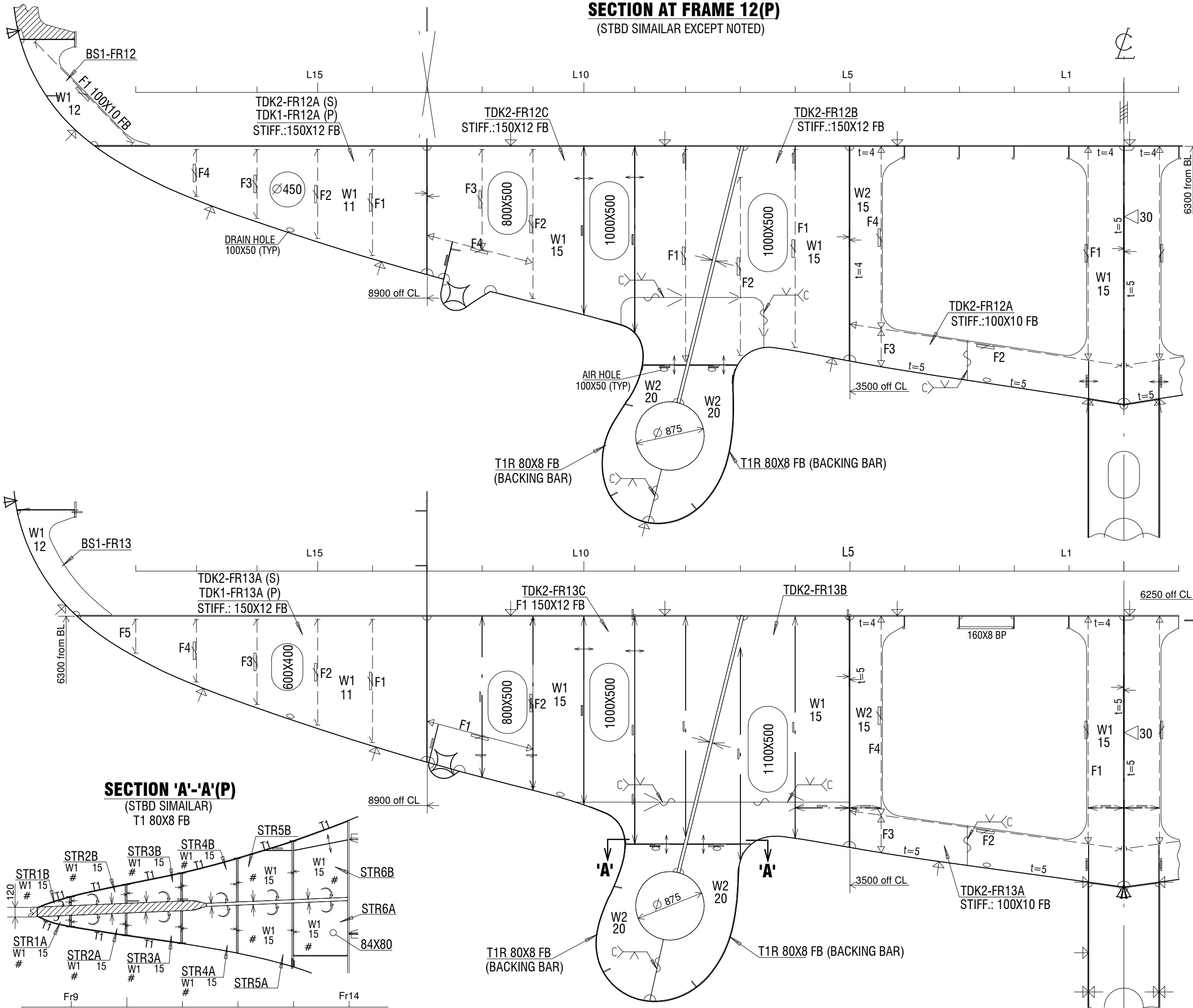


DETAIL 22
D.P. Weld

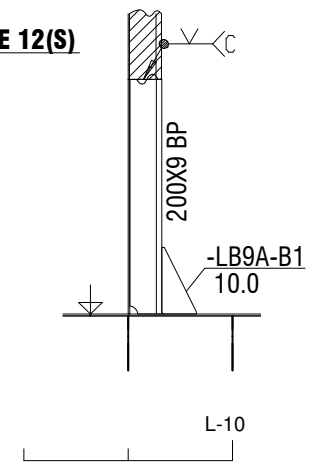




SECTION AT FRAME 12(P)
(STBD SIMILAR EXCEPT NOTED)

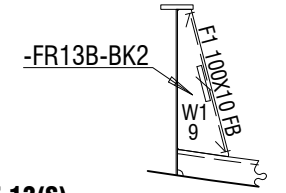


SECTION AT FRAME 12(S)

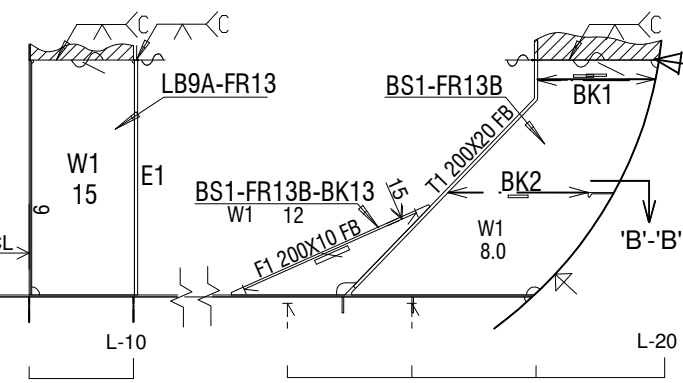


't' INDICATES THROAT THICKNESS

SEC. 'B'-'B'

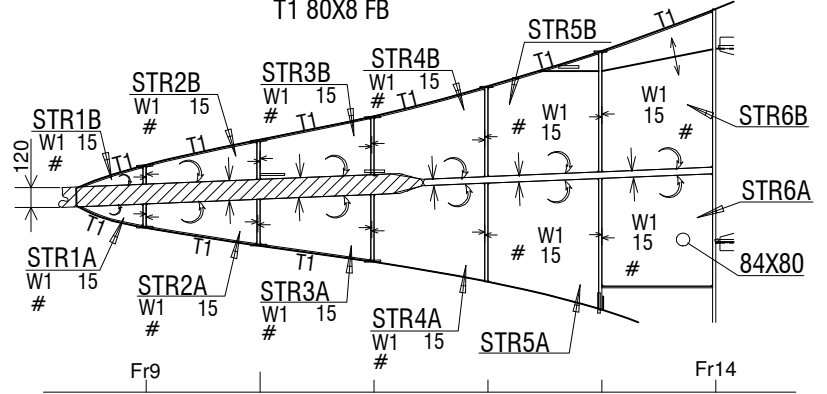


SECTION AT FRAME 13(S)

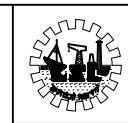


SECTION AT FRAME 13(P)
(STBD SIMILAR EXCEPT NOTED)

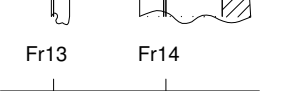
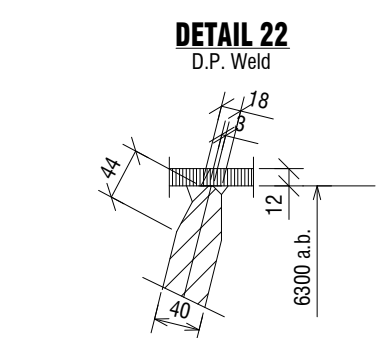
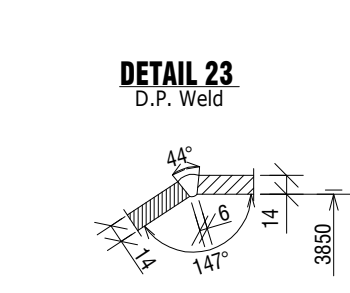
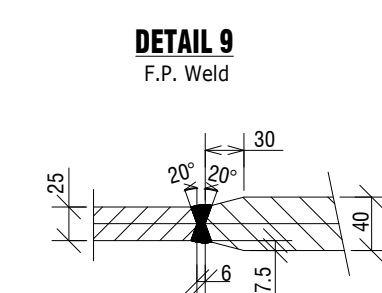
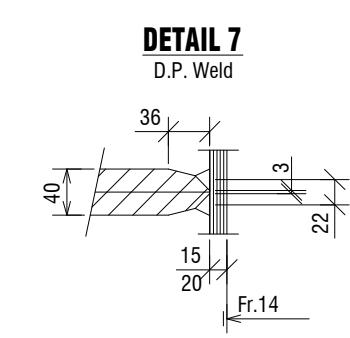
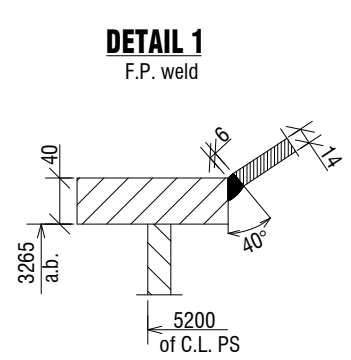
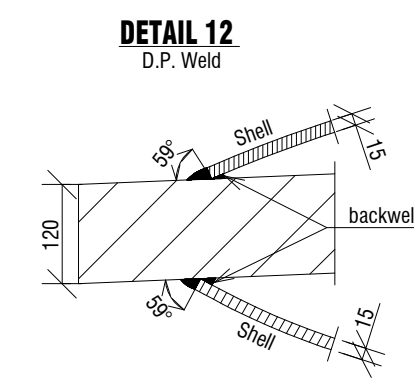
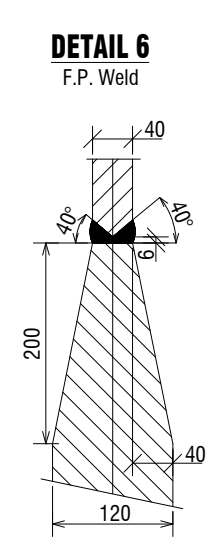
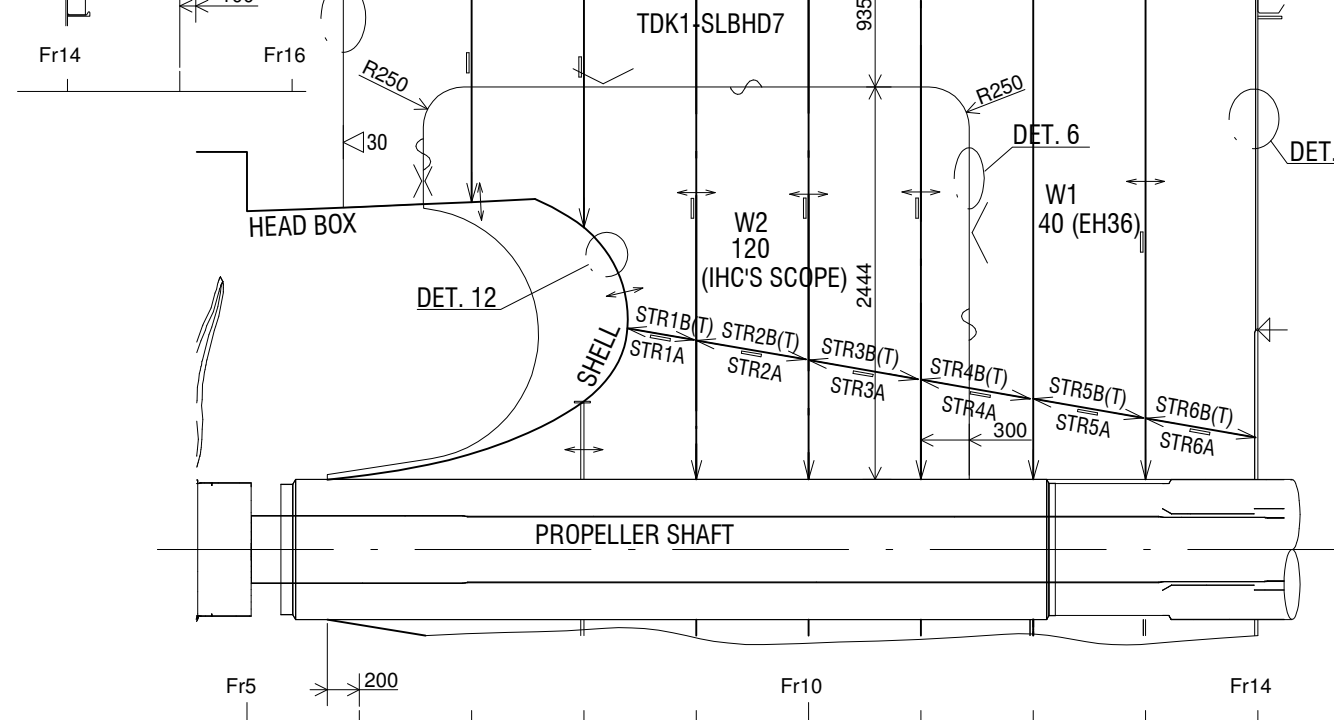
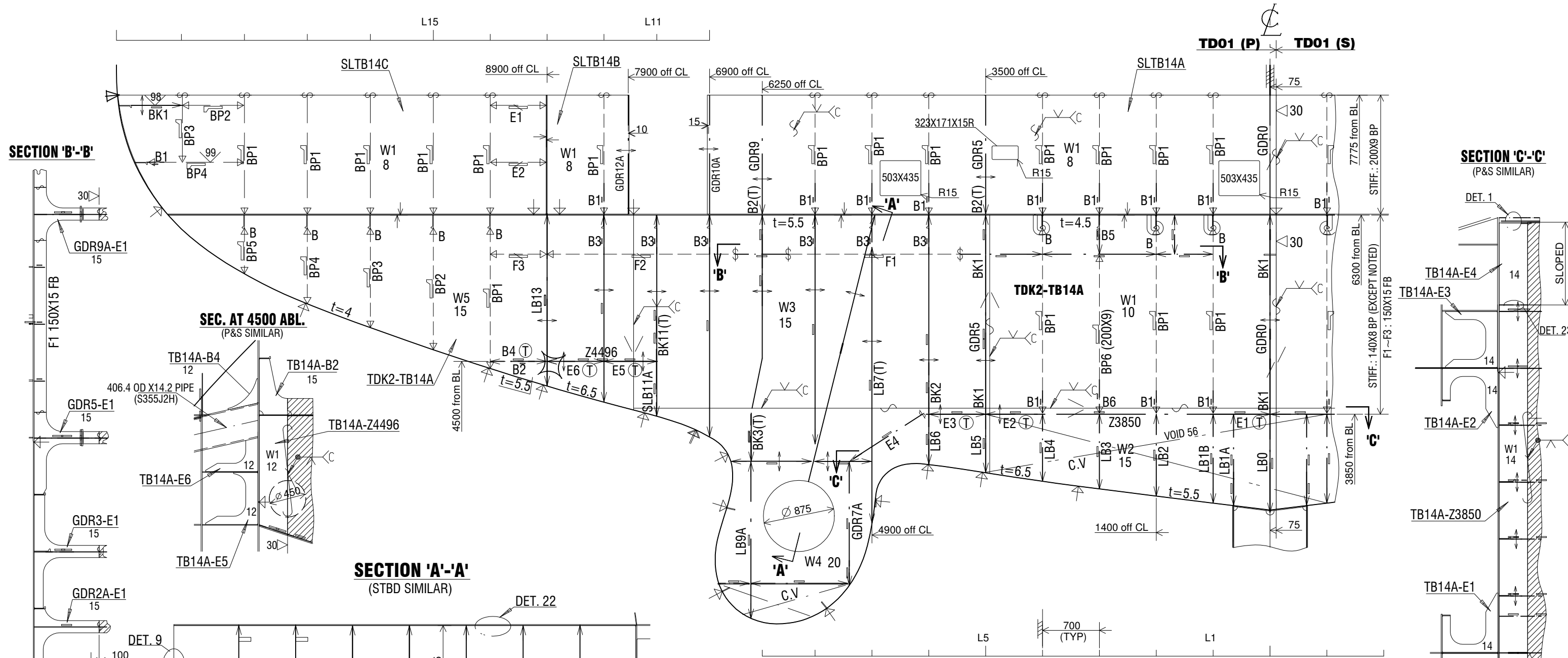
SECTION 'A'-'A'(P)
(STBD SIMILAR)
T1 80X8 FB

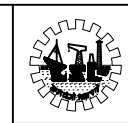


THROAT THICKNESS (t) = 6 FOR ALL SIDES

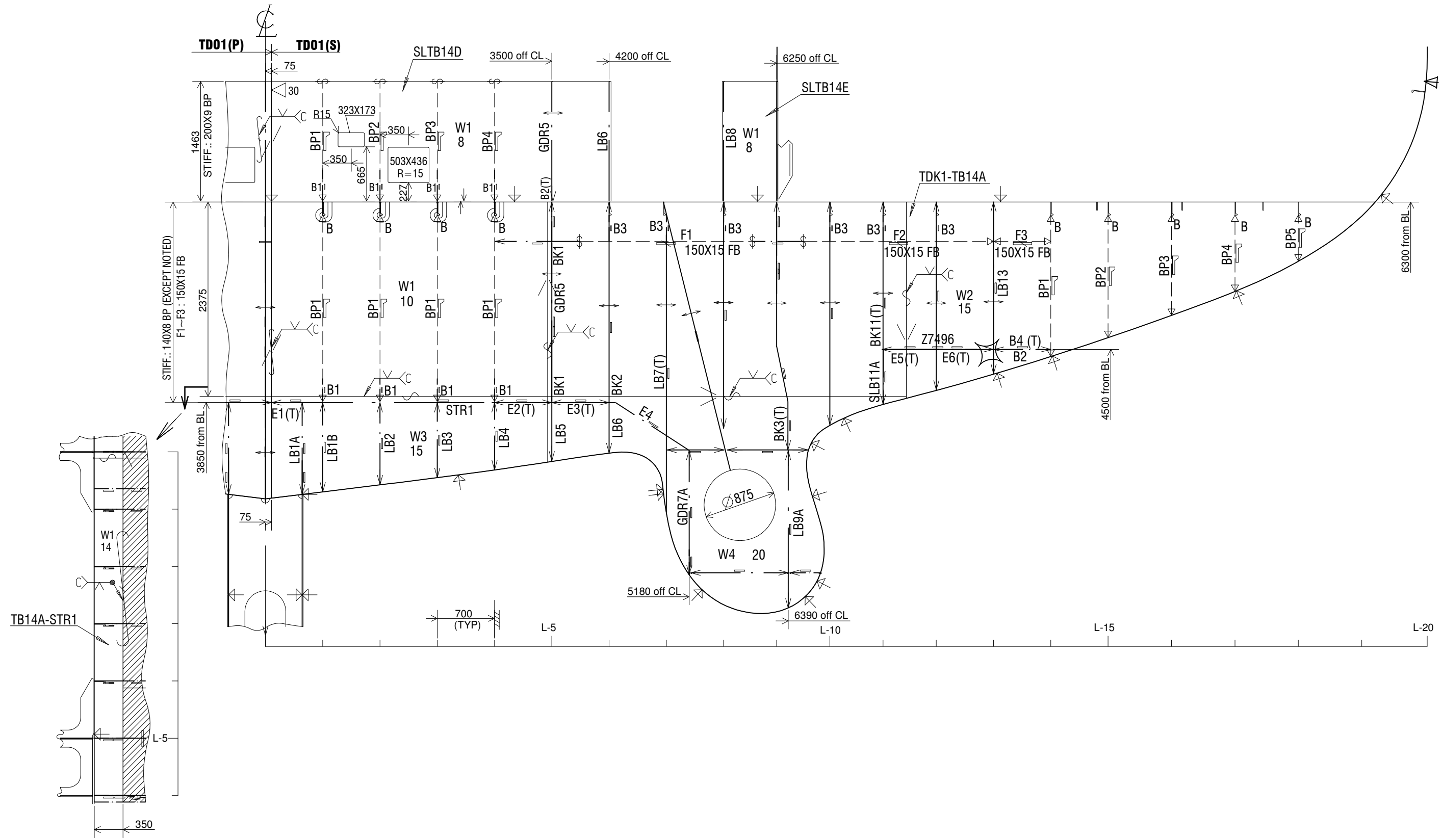


SECTION AT FRAME 14 (P)



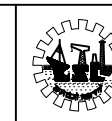


SECTION AT FRAME 14 (STBD)



WELDING DETAIL

THROAT THICKNESS OF FILLET WELDS FOR ORDINARY STIFFENERS

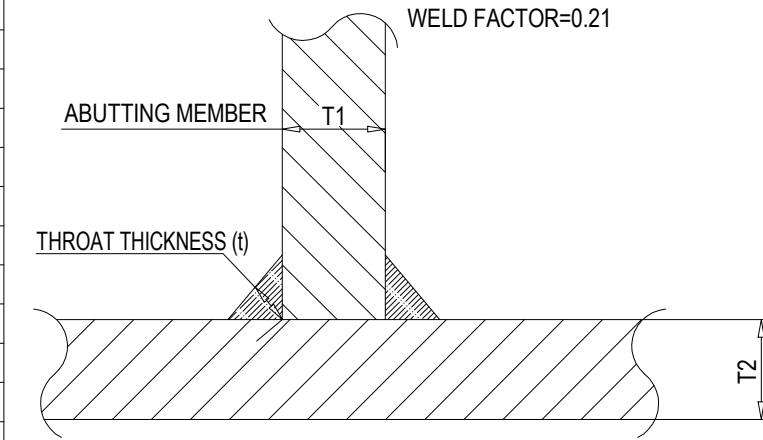


HP PROFILES

FLAT BARS

FILLET WELD THROAT THICKNESS	HP 80x6	HP 100x7 HP 120x7	HP 140x8 HP 160x8	HP 180x9 HP 200x9	HP 220x10 HP 240x10	HP 260x11 HP 280x11 HP 300x11	HP 320x12 HP 340x12	HP 370x13	HP 400x14
HP PROFILES	6	7	8	9	10	11	12	13	14
6	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
7	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
8	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
9	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
10	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
11	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
12	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
13	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
14	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
15	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
16	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
18	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
20	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
22	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
25	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
28	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
30	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
30	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5

FILLET WELD THROAT THICKNESS	- 80x6 - 100x8	- 100x10 - 120x10	- 120x12 - 150x12	- 150x15 - 200x15	- 200x20 - 250x20	- 250x25 - 300x25	- 300x30	
HP PROFILES	8	10	12	15	20	25	30	30
6	3.0	3.0	3.0	3.0	3.0	3.5	4.5	S.C
7	3.0	3.0	3.0	3.0	3.0	3.5	4.5	S.C
8	3.5	3.5	3.5	3.5	3.5	3.5	4.5	S.C
9	3.5	3.5	3.5	3.5	3.5	3.5	4.5	S.C
10	3.5	3.5	3.5	3.5	3.5	3.5	4.5	S.C
11	3.5	3.5	3.5	3.5	3.5	3.5	4.5	S.C
12	3.5	3.5	3.5	3.5	3.5	3.5	4.5	S.C
13	3.5	3.5	3.5	3.5	3.5	3.5	4.5	S.C
14	3.5	3.5	3.5	3.5	3.5	3.5	4.5	S.C
15	3.5	3.5	3.5	3.5	3.5	3.5	4.5	S.C
16	3.5	3.5	3.5	3.5	3.5	3.5	4.5	S.C
18	3.5	3.5	3.5	3.5	4.0	4.0	4.5	S.C
20	3.5	3.5	3.5	3.5	4.0	4.0	4.5	S.C
22	3.5	3.5	3.5	3.5	4.0	4.5	4.5	S.C
25	3.5	3.5	3.5	3.5	4.0	5.5	5.5	S.C
28	3.5	3.5	3.5	3.5	4.0	5.5	6.0	S.C
30	3.5	3.5	3.5	3.5	4.0	5.5	6.5	S.C
30	3.5	3.5	3.5	3.5	4.0	5.5	6.5	S.C



Welding of Std. brackets and collar plates

THICKNESS	WELD
8	3.5
9	3.5
10	3.5
11	4.0
12	4.0
13	4.5
14	5.0
15	5.5

Welding factor=0.3536 x t

REVISIONS			
REV	DATE	DESCRIPTION	SIGN

IRS/LRS

REV-0

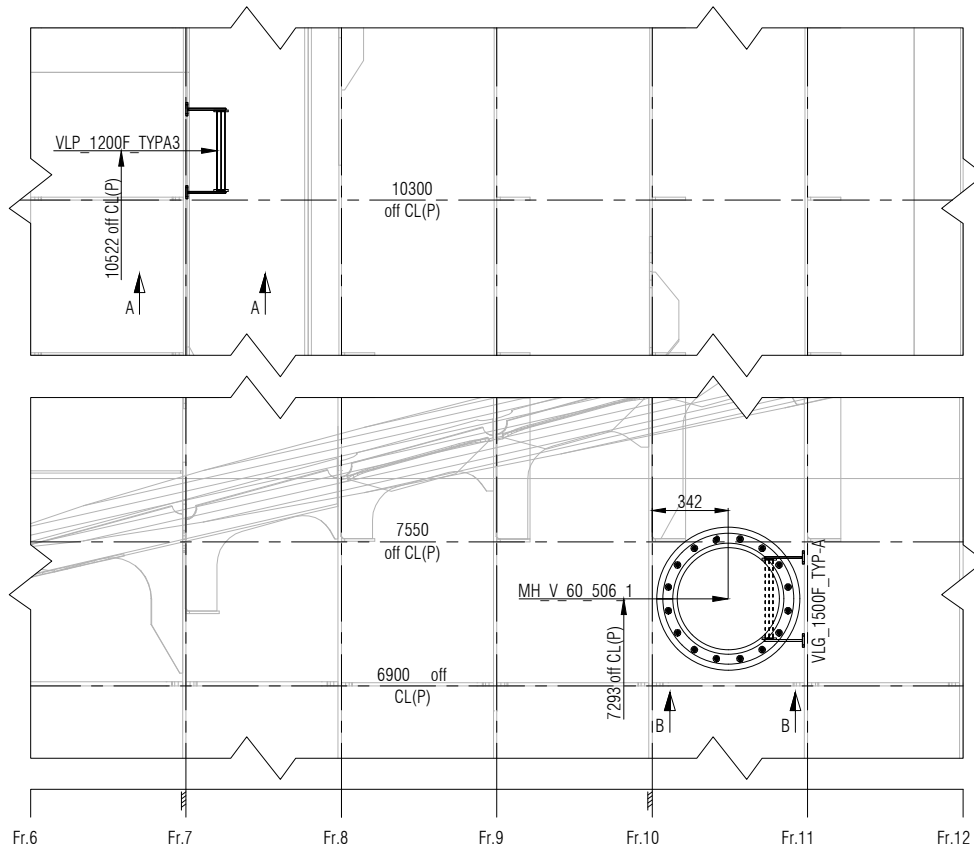


COCHIN SHIPYARD LIMITED

COCHIN - 682 015

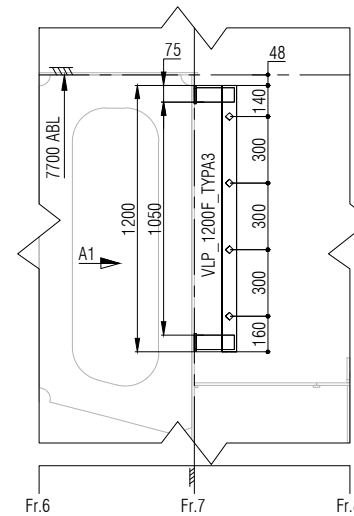
SHIP No.	SHIP 037	12000 M ³ TRAILING SUCTION HOPPER DREDGER
CLIENT	DCIL	
APPROVED	Naishan	MANHOLE AND VERTICAL LADDER ARRANGEMENT (UNIT TD01P)
CHECKED	Ganesh	
DRAWN	Feroz	
DATE : 02-08-2024		SCALE N.T.S
ISSUED TO	DEPT.	SHEET No: 1 / 2
No.		

MANHOLE AND VERTICAL LADDER ARRANGEMENT (UNIT TD01P)

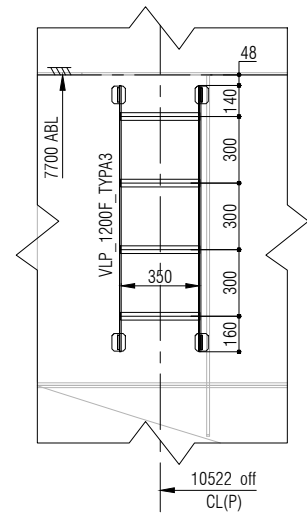


PLAN VIEW
7700 ABL

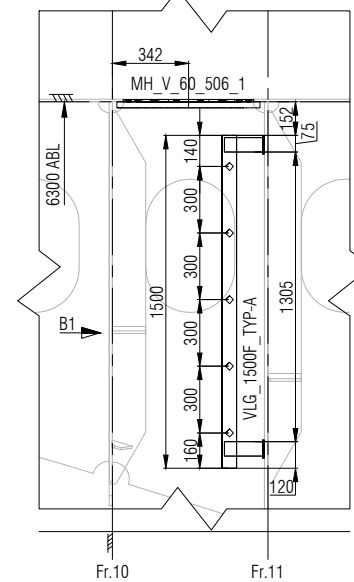
SI NO	DESCRIPTION	PIECE MARK	QTY
1	Flushed Type Manhole	MH_V_60_506_1	1
2	Vertical Ladder	VLG_1500F_TYP-A	1
3	Vertical Ladder	VLP_1200F_TYPA3	1



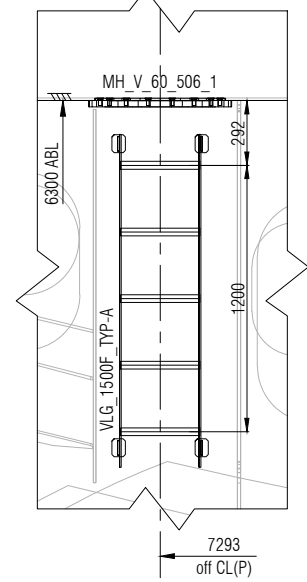
VIEW A-A



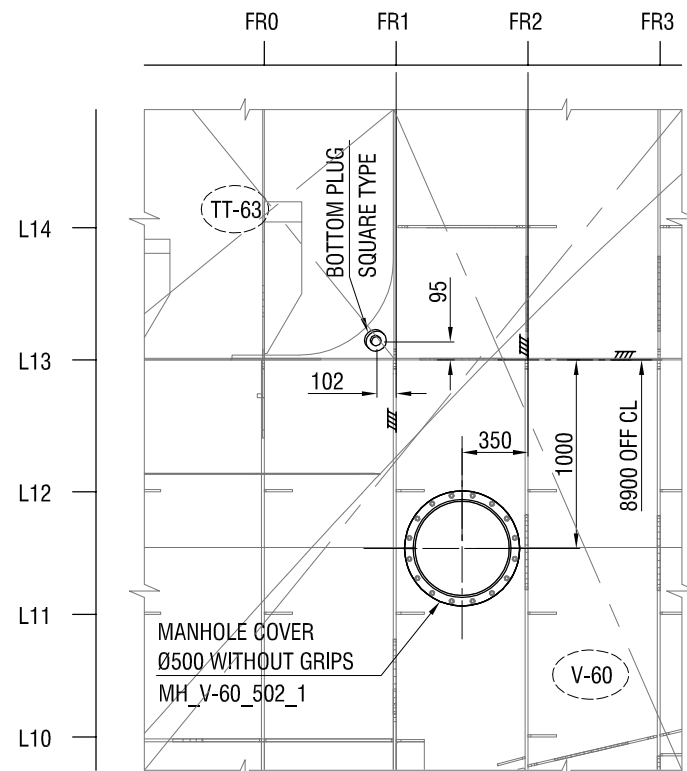
VIEW A1



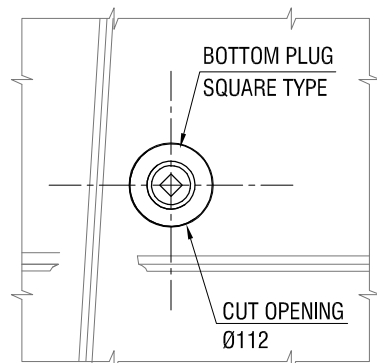
VIEW B-B



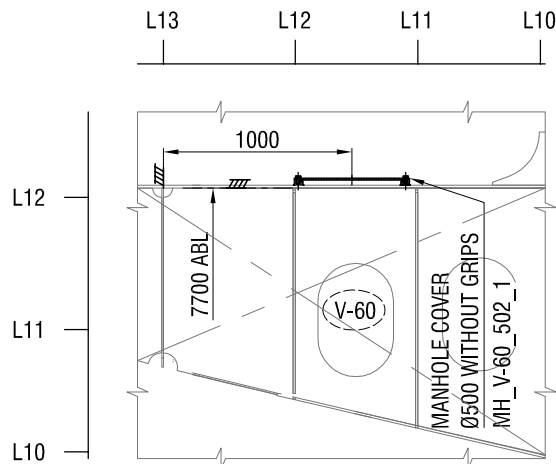
VIEW B1



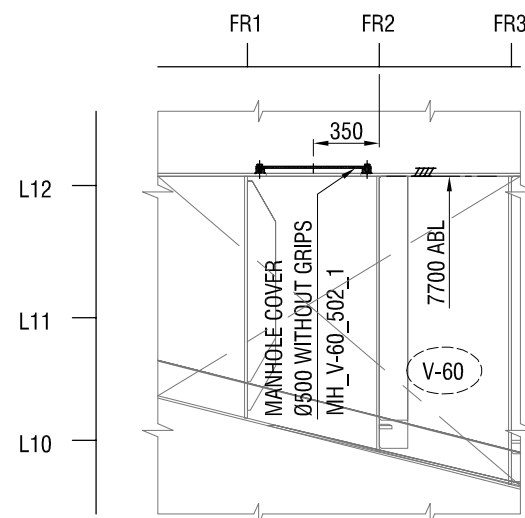
PLAN VIEW 8350 ABL



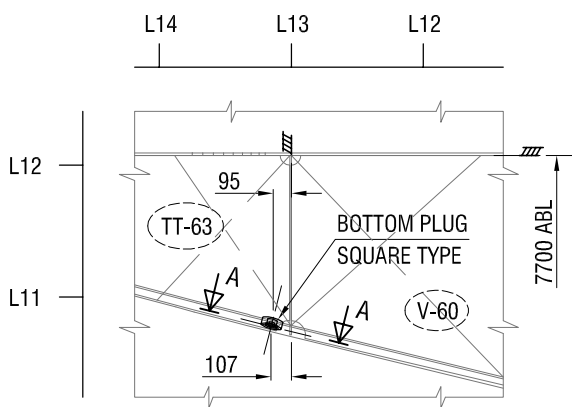
SECTION A-A



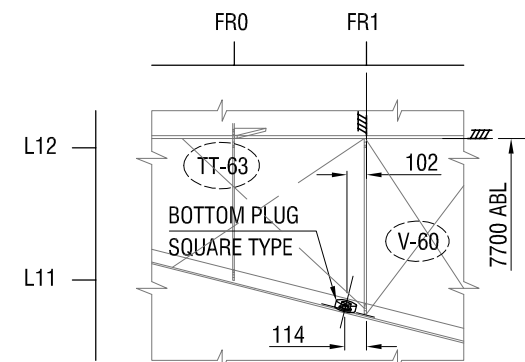
TRANSV.VIEW FR.1 TO FR.2 (LOOKING FWD)



LONG.VIEW B/W 7550&8200 OFF CL(P) LOOKING PORT

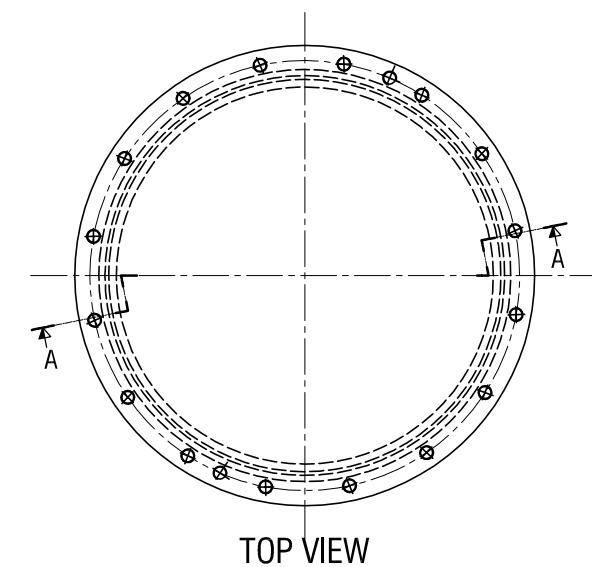


TRANSV.VIEW FR.0 TO FR.1 (LOOKING FWD)

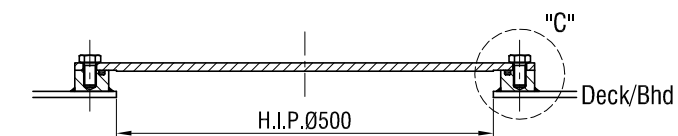


LONG.VIEW B/W 8900&9250 OFF CL(P) LOOKING PORT

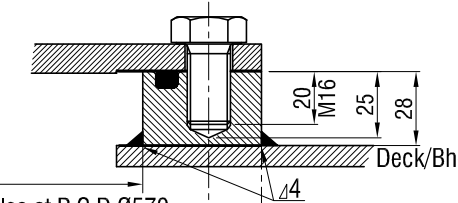
MANHOLE COVER Ø500 WITHOUT GRIPS- DETAIL



TOP VIEW



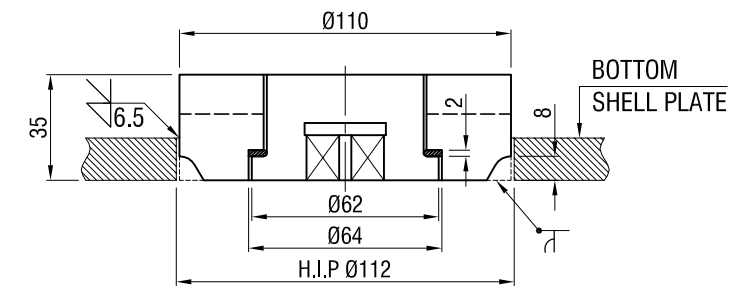
SECTION A-A



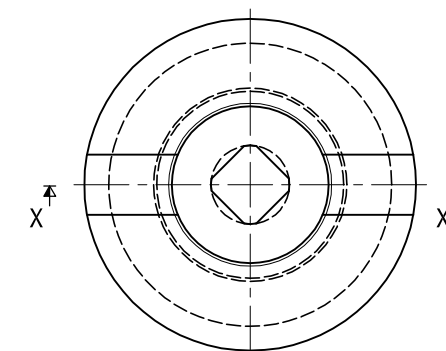
- = Ø520
- = 16 Threaded holes at P.C.D Ø570
- = Ø610

DETAIL - "C"

BOTTOM DRAIN PLUG (SQUARE)

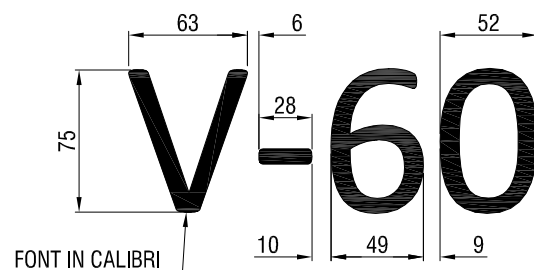


SECTION X-X



TOP VIEW

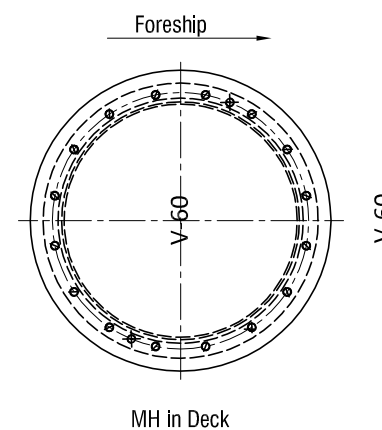
DETAILS OF TANK NAME MARKING



NOTE:-

1. TANK NAME ABBREVIATION TO BE MARKED WITH STAINLESS STEEL WELDING BEADS ON TANK TOP NEAR MANHOLE COVER.
2. LETTER TO BE IN CALIBRI FONT PAINTED IN BLACK OR WHITE WHICH IS CONTRARY TO THE COLOUR OF DECK PLATE.

ORIENTATION OF MANHOLE COVER



SL NO	TANK NAME	ABBREV.	MANHOLE		BOTTOM PLUG	
			TYPE	QTY	TYPE	QTY
1	VOID 60 PS	V-60	MH_V-60_502_1	1 NO	-	-
2	TRIM TANK 63 PS	TT-63	-	-	BOTTOM PLUG SQUARE TYPE	1 NO

GENERAL NOTE:-

1. All Dimensions are in mm.
2. All weldings except noted shall be as per yard practice.
3. Remove all sharp edges.

REFERENCE DRAWINGS:-

1. GENERAL ARRANGEMENT PLAN : 63552-0338-010
2. PLAN OF TANKS : 63552-0353-010

REVISIONS			
REV	DATE	DESCRIPTION	SIGN

IRS/LRS

REV-0

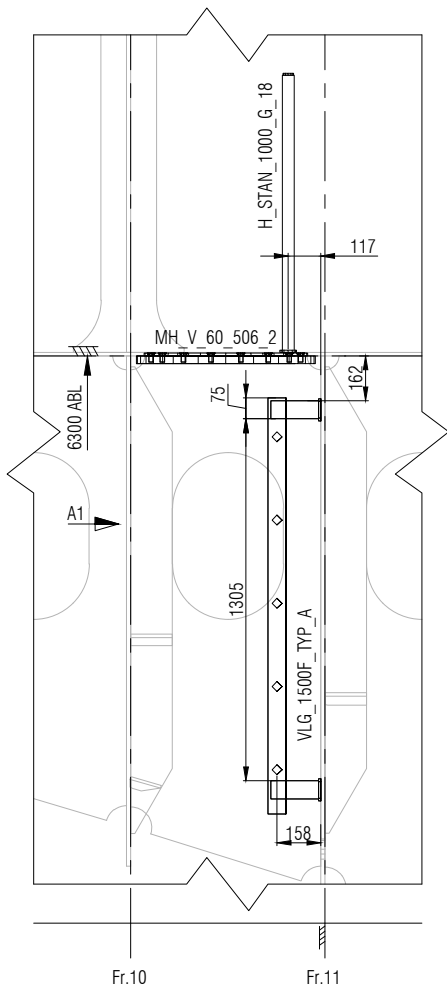


COCHIN SHIPYARD LIMITED

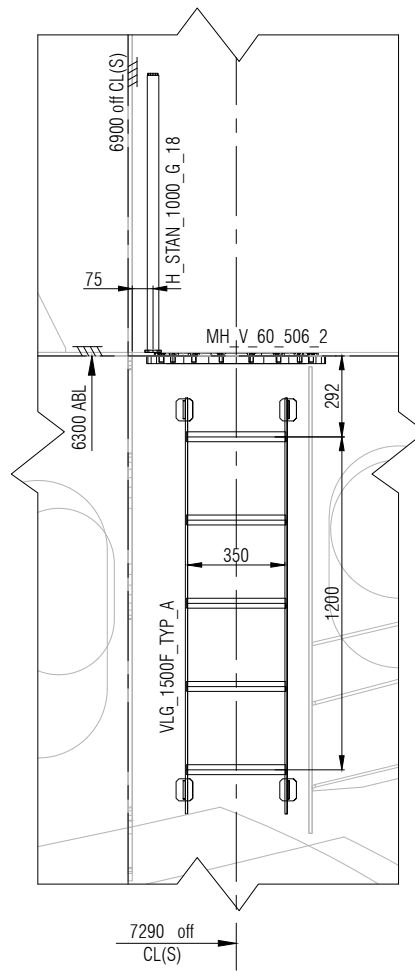
COCHIN - 682 015

SHIP No.	SHIP 037	12000 M ³ TRAILING SUCTION HOPPER DREDGER
CLIENT	DCIL	
APPROVED	Naishan	MANHOLE AND VERTICAL LADDER ARRANGEMENT (UNIT TD01S)
CHECKED	Ganesh	
DRAWN	Feroz	
DATE : 02-08-2024		SCALE N.T.S
ISSUED TO	DEPT.	SHEET No:1 / 2
No.		

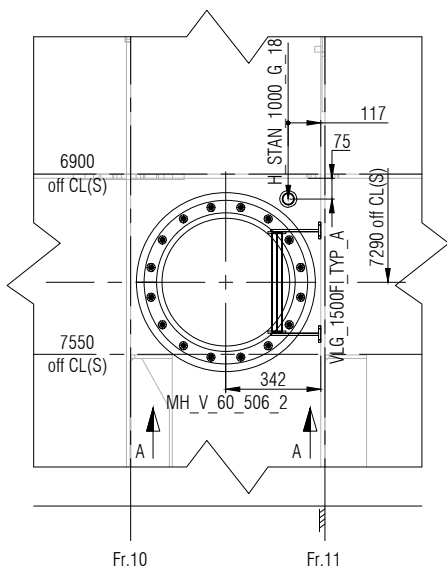
S037



VIEW A-A



VIEW A1



PLAN VIEW

7700 ABL

SI NO	DESCRIPTION	PIECE MARK	QTY
1	Flushed Type Manhole	MH_V_60_506_2	1
2	Vertical Ladder	VLG_1500F_TYP_A	1
3	Stanchion	H_STAN_1000_G_18	1

REV. No.	REV. MARK	DESCRIPTION	DATE	SIGN

REFERENCE MLF
1. T2ATD01SHPL0

THIS DOCUMENT CONTAINS 03 PAGES

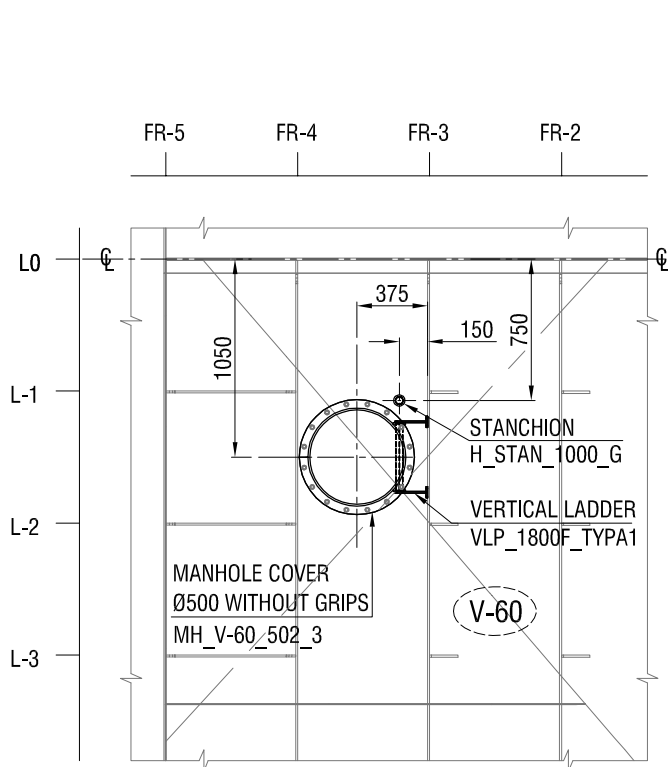
REV. 0



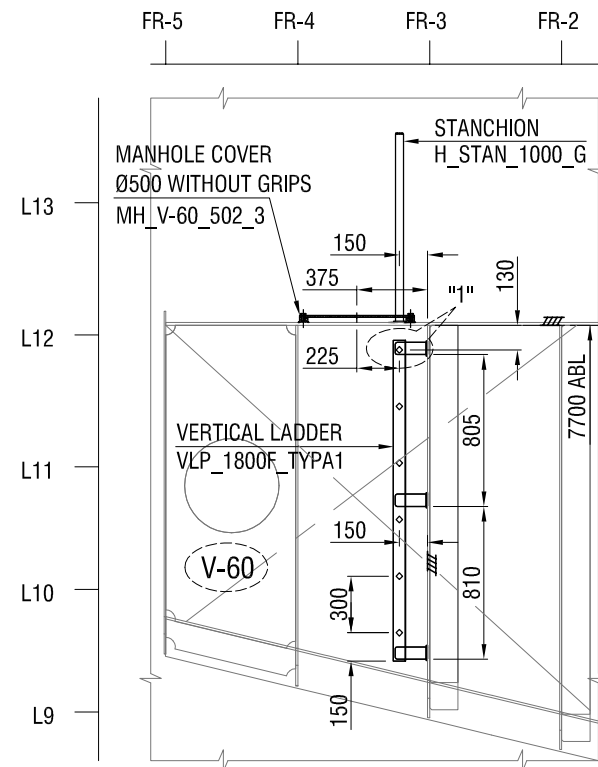
COCHIN SHIPYARD LIMITED

COCHIN - 682 015

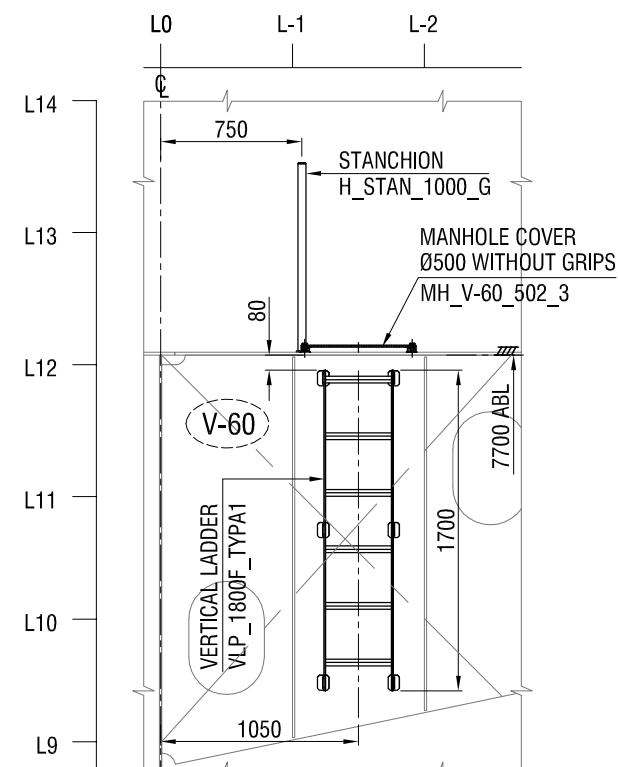
YARD No.	SHIP 037	IHC BEAGLE 12 TSHD	
OWNER	DCI		
APPROVED	Tony Johnson	MANHOLE AND VERTICAL LADDER ARRANGEMENT IN BLOCK TD01S	
CHECKED	Sandeep John		
DRAWN	Harikrishnan		
DATE	19/06/2024	SCALE - NTS	DRG. No. : YT2ATD01SHPL000
ISSUED TO			
DEPT.			
No.			



PLAN VIEW B/W 9050&5650 ABL

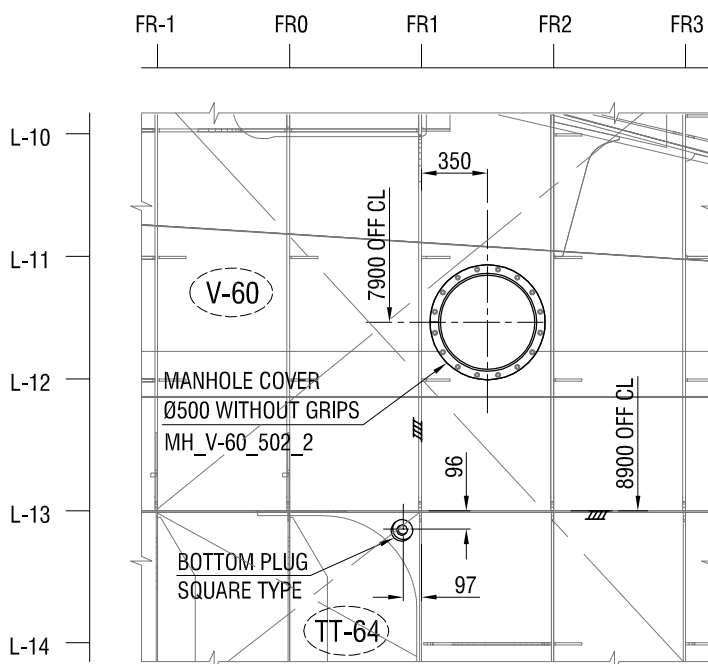
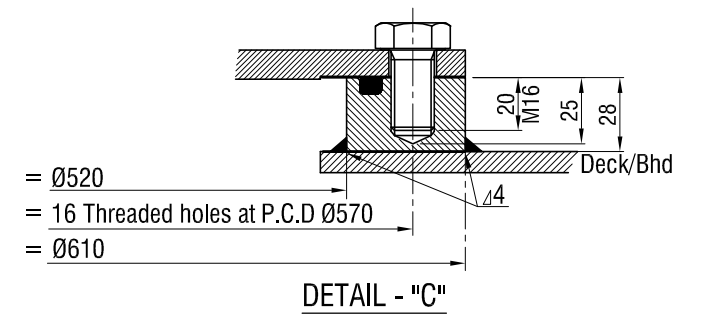
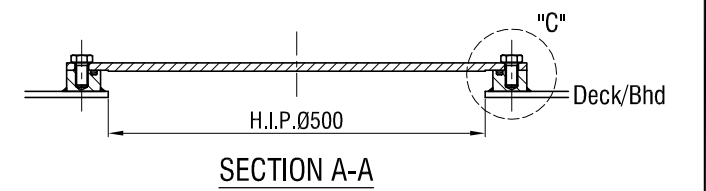
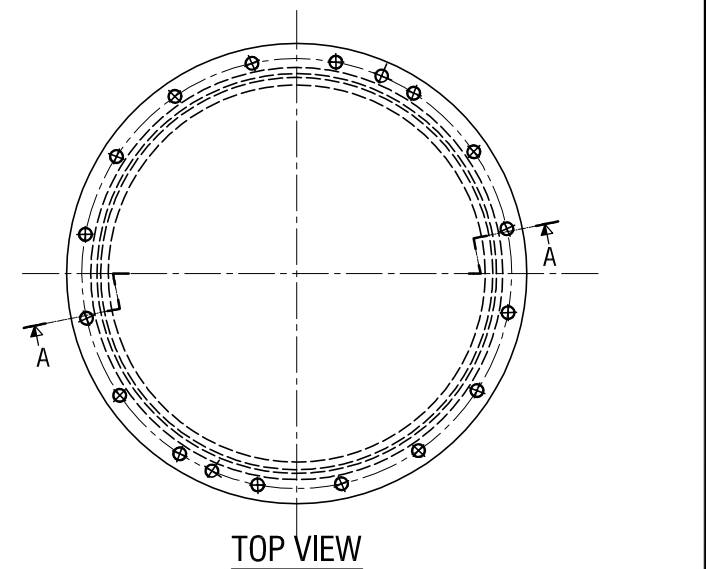


LONG.VIEW 700&1400 OFF CL(S)
LOOKING PORT

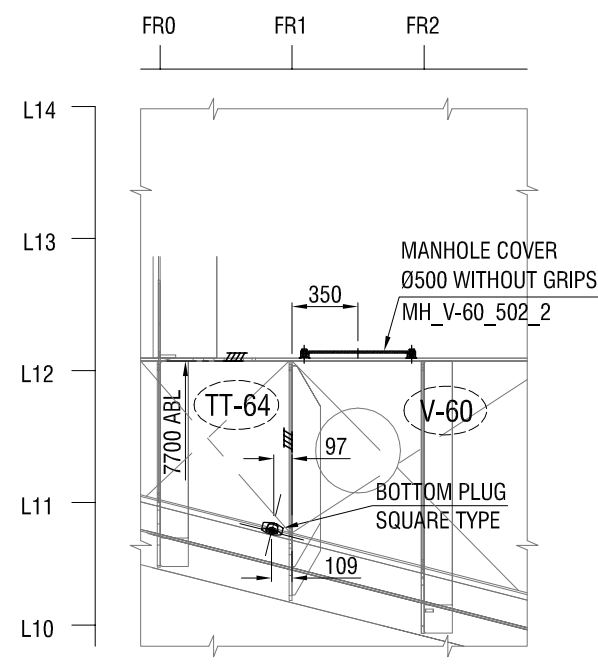


TRANSV.VIEW FR.-4 TO FR.-3
(LOOKING FWD)

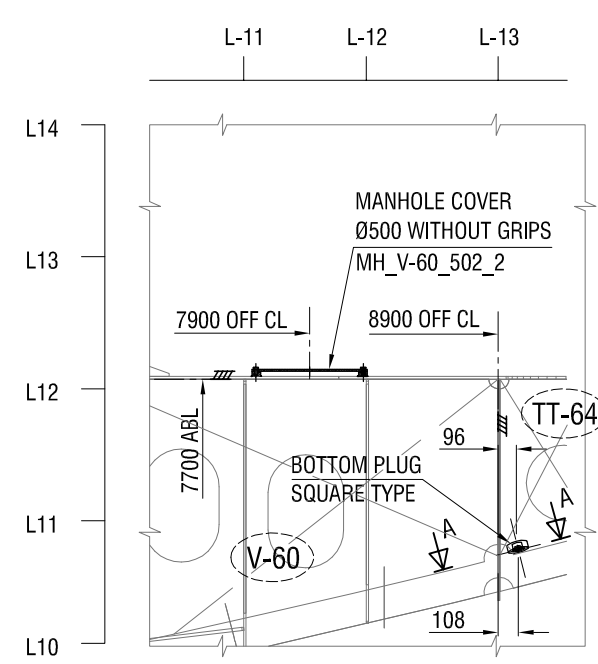
MANHOLE COVER Ø500 WITHOUT GRIPS- DETAIL



PLAN VIEW B/W 9050&5650 ABL

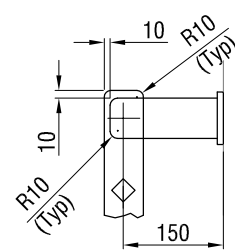
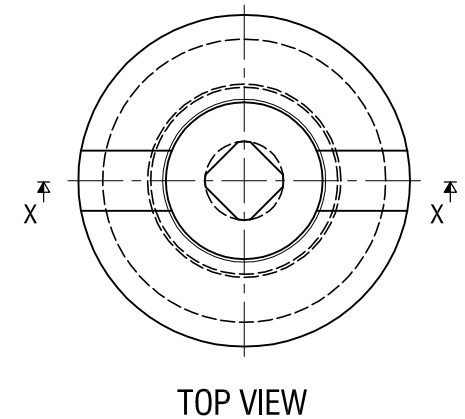
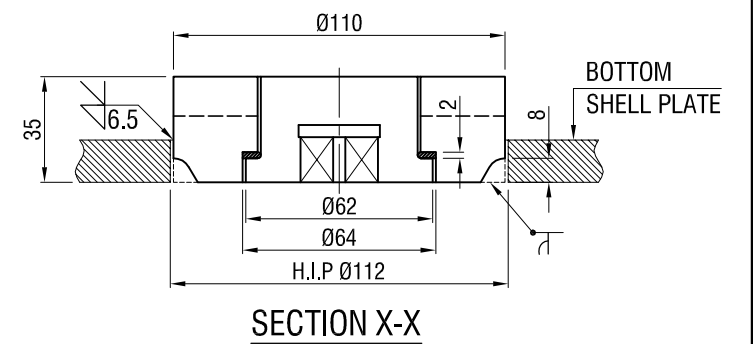


LONG.VIEW 7550&8200 OFF CL(S)
LOOKING PORT

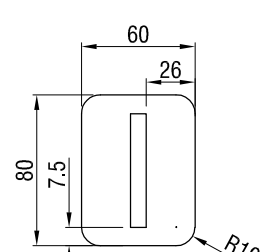


TRANSV.VIEW FR.1 TO FR.2
(LOOKING FWD)

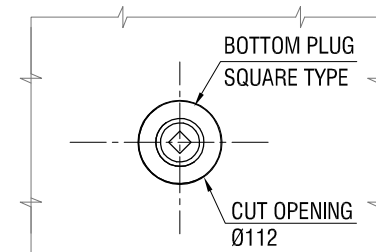
BOTTOM DRAIN PLUG (SQUARE)



DETAIL - "1"



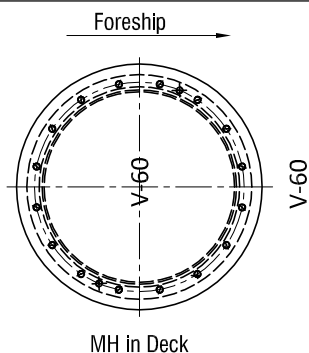
DETAILS OF PAD



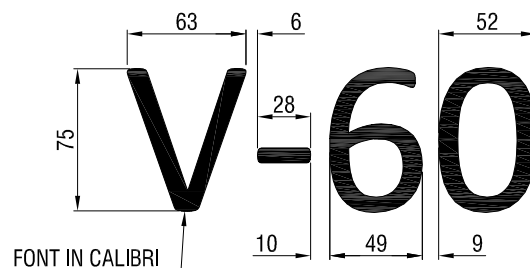
SECTION A-A

SL NO	TANK NAME	ABBREV.	MANHOLE		BOTTOM PLUG		VERTICAL LADDER		STANCHION	
			TYPE	QTY	TYPE	QTY	TYPE	QTY	TYPE	QTY
1	VOID 60 SB	V-60	MH_V-60_502_3	1 NO	-	-	VLP_1800F_TYPA1	1 NO	H_STAN_1000_G	1 NO
			MH_V-60_502_2	1 NO	-	-	-	-	-	-
2	TRIM TANK 64 SB	TT-64	-	-	BOTTOM PLUG SQUARE TYPE	1 NO	-	-	-	-

ORIENTATION OF MANHOLE COVER



DETAILS OF TANK NAME MARKING



GENERAL NOTE:-

1. All Dimensions are in mm.
2. All weldings except noted shall be as per yard practice.
3. Item VLP_1800F_TYPA1 shall be suitably cut to required length at site.
4. Remove all sharp edges.

NOTE:-

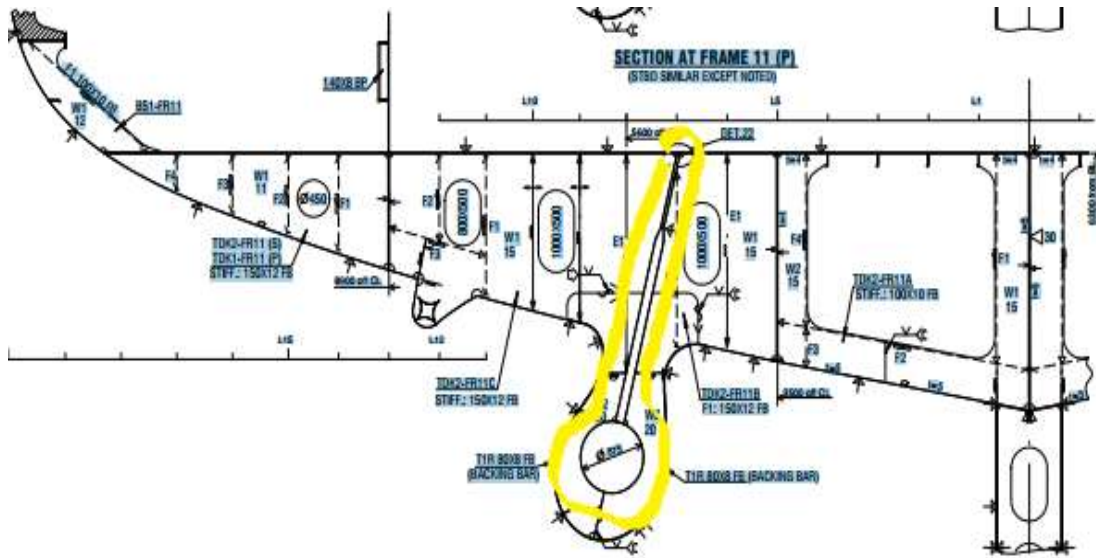
1. TANK NAME ABBREVIATION TO BE MARKED WITH STAINLESS STEEL WELDING BEADS ON TANK TOP NEAR MANHOLE COVER.
2. LETTER TO BE IN CALIBRI FONT PAINTED IN BLACK OR WHITE WHICH IS CONTRARY TO THE COLOUR OF DECK PLATE.

REFERENCE DRAWINGS:-

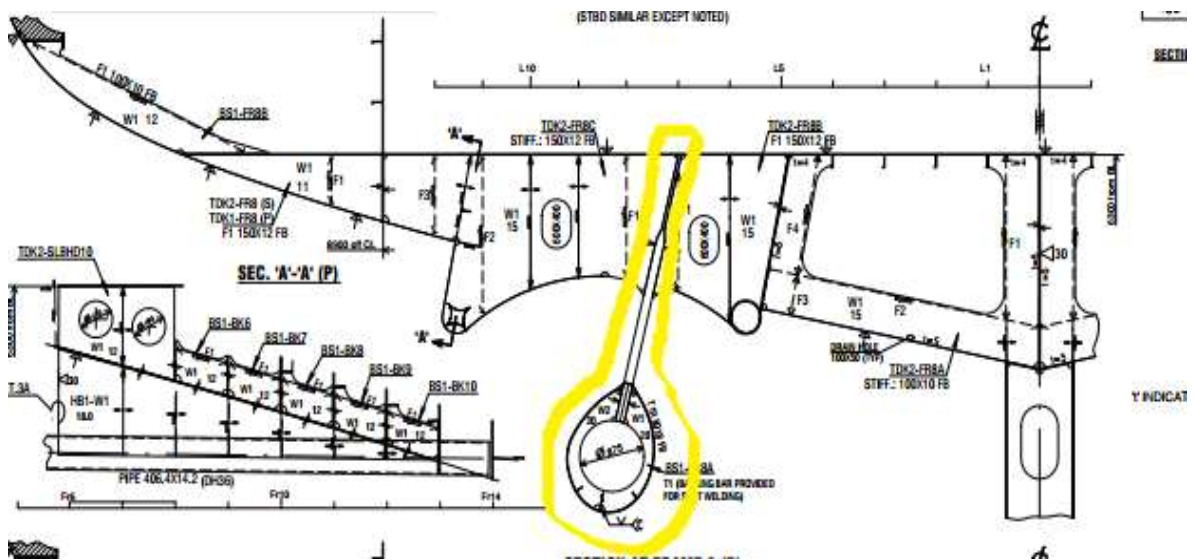
1. GENERAL ARRANGEMENT PLAN : 63552-0338-010
2. PLAN OF TANKS : 63552-0353-010
- 3.F20370352613001 : FABRICATION DETAILS OF STANCHIONS AND DRIP TRAYS.

BLOCK STAGE PREHEATING AND STRESS RELIEVING JOINTS

8 NOS OF FILLET JOINT IN BLOCKS STAGE



8 NO.S OF FILLET JOINT IN



JOINTS COMING OUTSIDE THE BLOCK ARE MARKED AS GREEN AND INSIDE BLOCK AS YELLOW

