



PT. PINDAD (PERSERO)


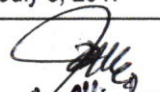
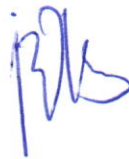




## SPECIFICATION

FOR

## CRANE STRUCTURE

(FOR PRODUCER)

MS NO. : MS-001-Crane Structure-2016

PREPARED BY		CHECKED BY	APPROVED BY	REVISION		
				NO	DATE	SIGNATURE
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DATE	July 5, 2017	July 5, 2017	July 5, 2017	3		
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Issue Date : July 5, 2017

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**1. SCOPE**

This specification covers the requirements and conditions of admission to the Crane Structure.

**2. REQUIREMENTS**

2.1. Basic Specifications of The Crane Structure

The structure shall be built by referring to the following informations:

1. Description of Structure :

- The new structure ('CS2' in Figure 1) shall be built **only on one side** of the 42C building to complement the existing crane structure already built on the other side of the building ('CS1' in Figure 1) to form a free-standing platform for overhead electric crane.
- The new structure shall be designed and built to comply with the existing crane structure hence together ('CS1' and 'CS2') can be used as runway for crane operation in building 42C. These structure shall **accommodate the total weight of the crane + 10 ton load** as a minimum requirement.
- The new structure shall be designed and built to also provide a provision for crane runway support in adjacent building (42B).

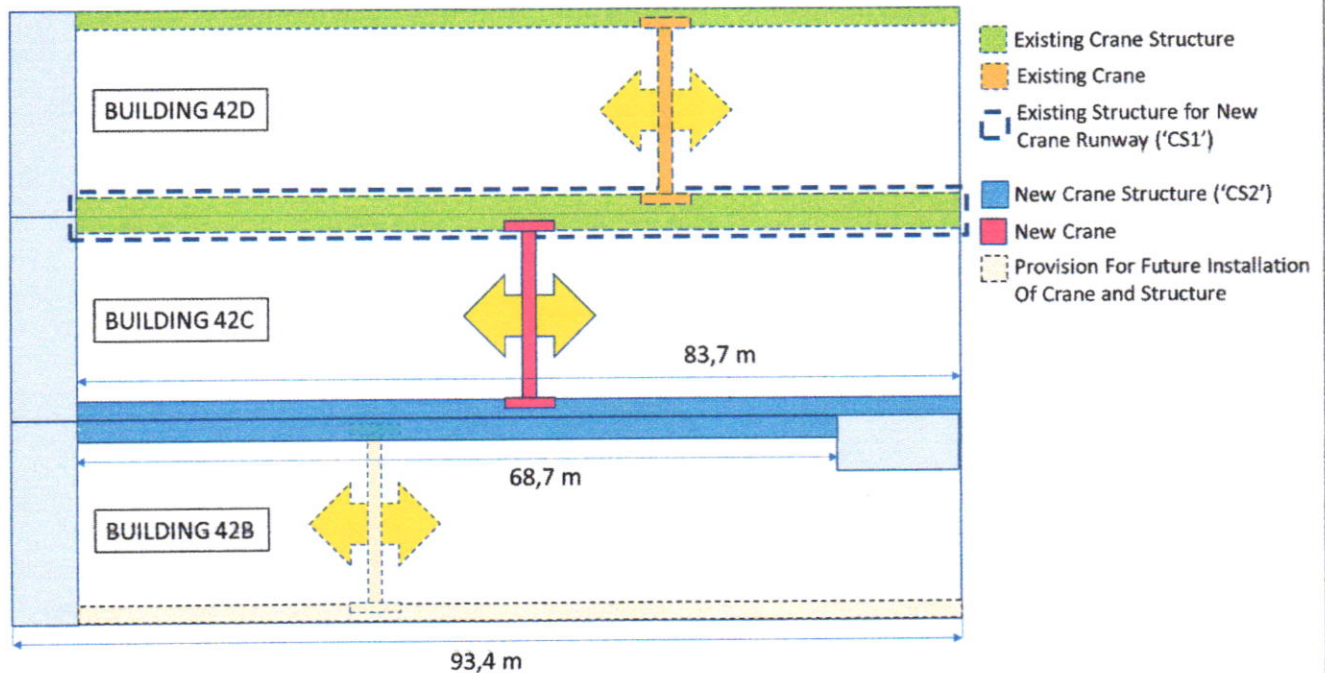


Figure 1. General Layout Illustration for Crane Structure

2. Overhead Crane Information :

- Max. load capacity : 10 ton
- Estimated total weight : 6 ton

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2. Existing Crane Structure 'CS1' Information (for reference) :
- Height (floor to top of runway beam) : 7.2 m
  - Overall Runway Beam Length : approx. 83.7 m

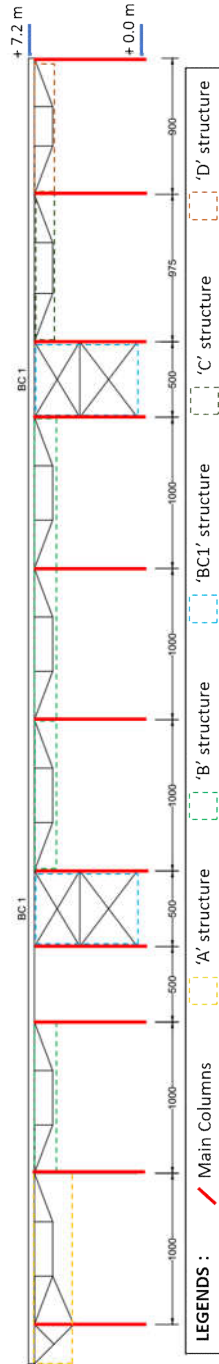
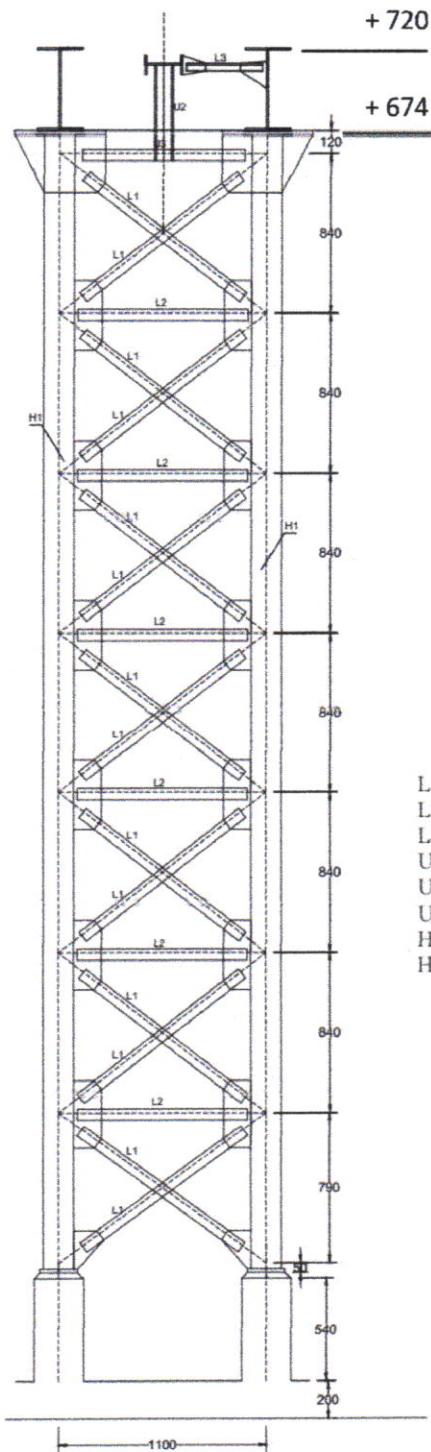


Figure 2. Side View Structure Schematic for 'CS1'.  
Dimensions in centimeter (cm)

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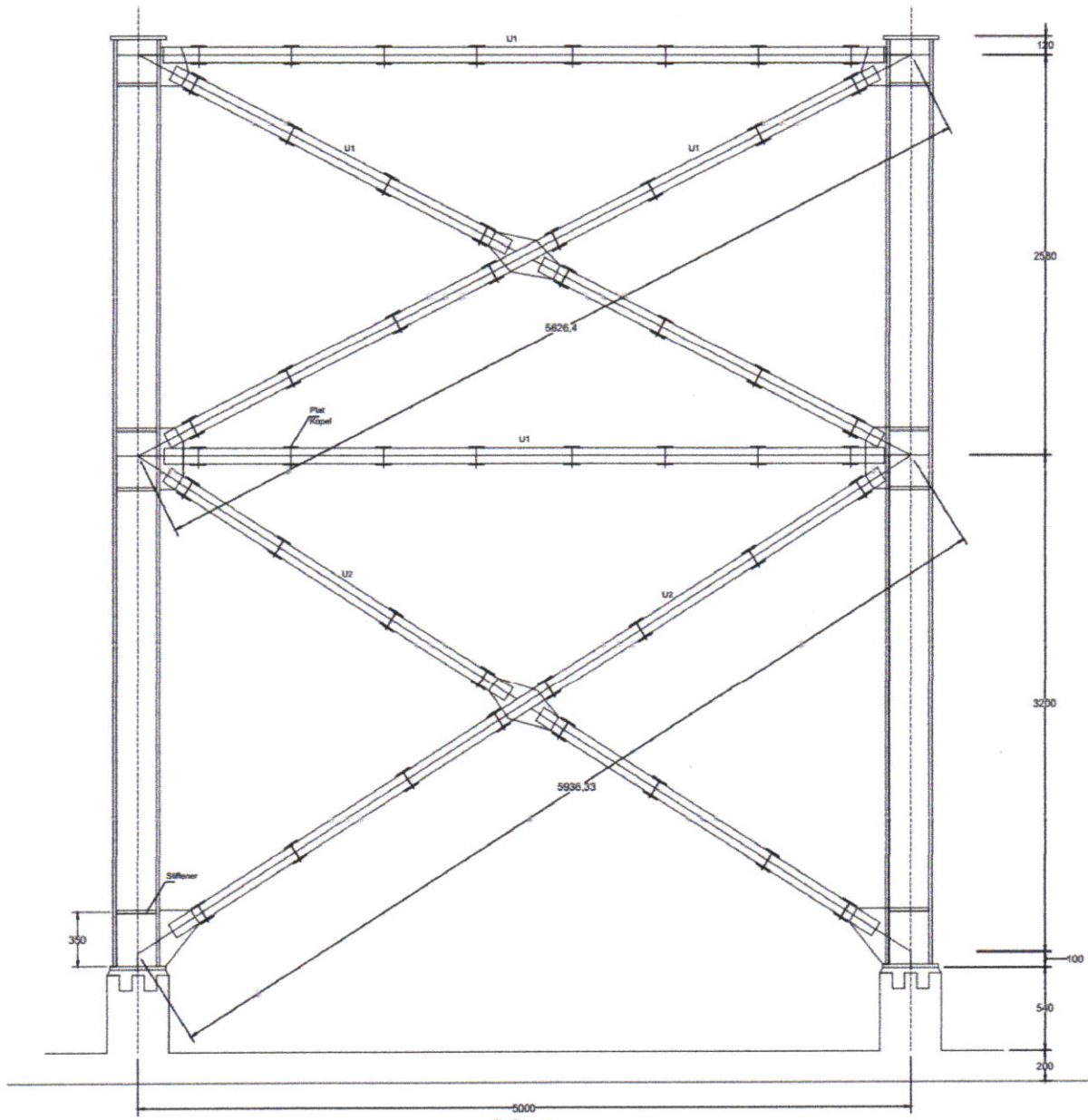
- L1 = Double L 70 . 70 . 7, Baut dipakai = Ø19
- L2 = Double L 60 . 60 . 6,
- L3 = Double L 50 . 50 . 5,
- U1 = Double C 150 . 75 . 6.5, Baut dipakai = Ø16
- U2 = Double C 80 . 45 . 6.8, Baut dipakai = Ø19
- U3 = Double C 125 . 65 . 6.8, Baut dipakai = Ø19
- H1 = IWF 300. 150. 6. 9
- H4 = IWF 250. 125. 7. 11

Figure 3. Structure Schematic for 'CS1' - Main Columns

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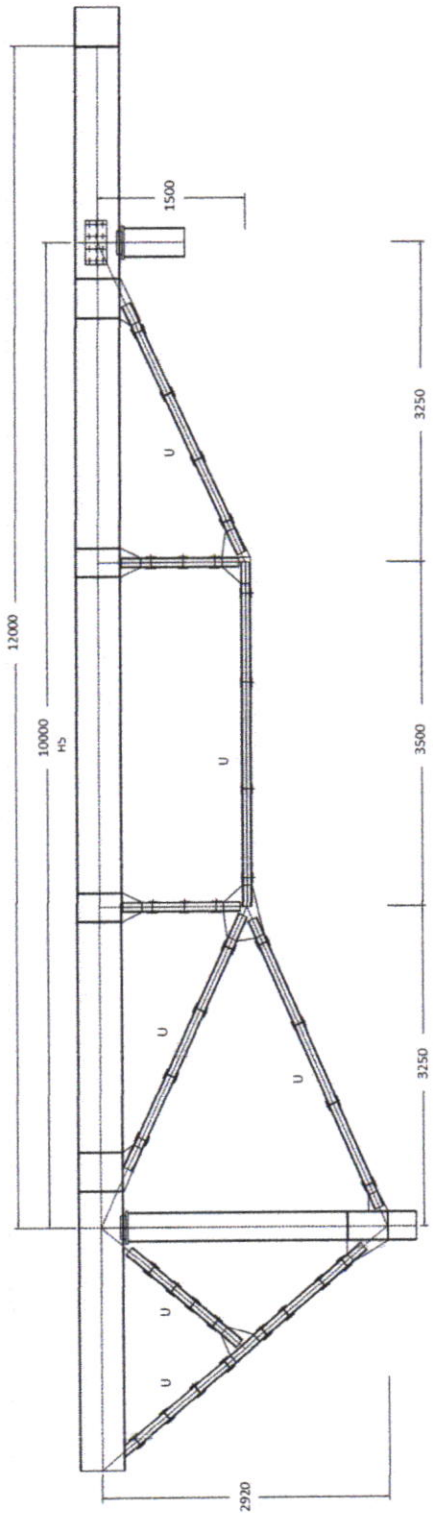


- L1 = Double L 70 . 70 . 7, Baut dipakai = Ø19
- L2 = Double L 60 . 60 . 6,
- L3 = Double L 50 . 50 . 5,
- U1 = Double C 150 . 75 . 6.5, Baut dipakai = Ø16
- U2 = Double C 80 . 45 . 6.8, Baut dipakai = Ø19
- U3 = Double C 125 . 65 . 6.8, Baut dipakai = Ø19
- H1 = IWF 300 . 150 . 6 . 9
- H4 = IWF 250 . 125 . 7 . 11

Figure 4. Structure Schematic for 'CS1' - BC1

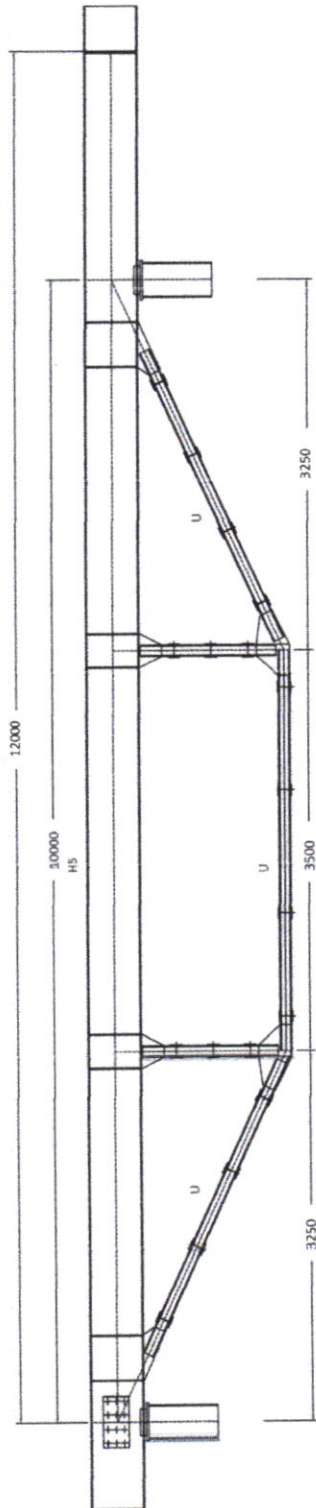
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 <p data-bbox="1005 952 1069 1406">U = Double C 100.50.6, Baut dipakai = <math>\phi 19</math> H5 = IWF 450.225.9.14</p> <p data-bbox="1085 816 1165 1474" style="border: 1px solid black; padding: 5px;">Figure 5. Structure Schematic for 'CS1' - A</p>		
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U = Double C 100.50.6, Baut dipakai =  $\phi 19$   
H5 = IWF 450.225.9.14

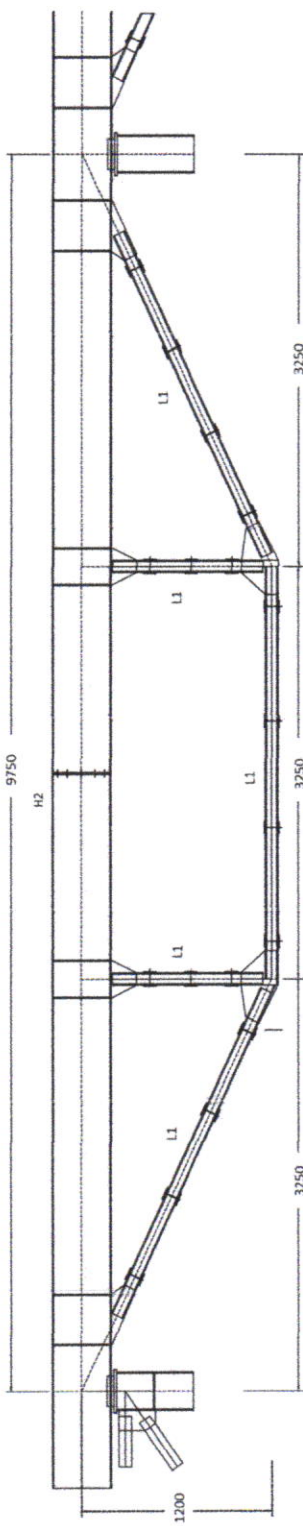
Figure 6. Structure Schematic for 'CS1' - B

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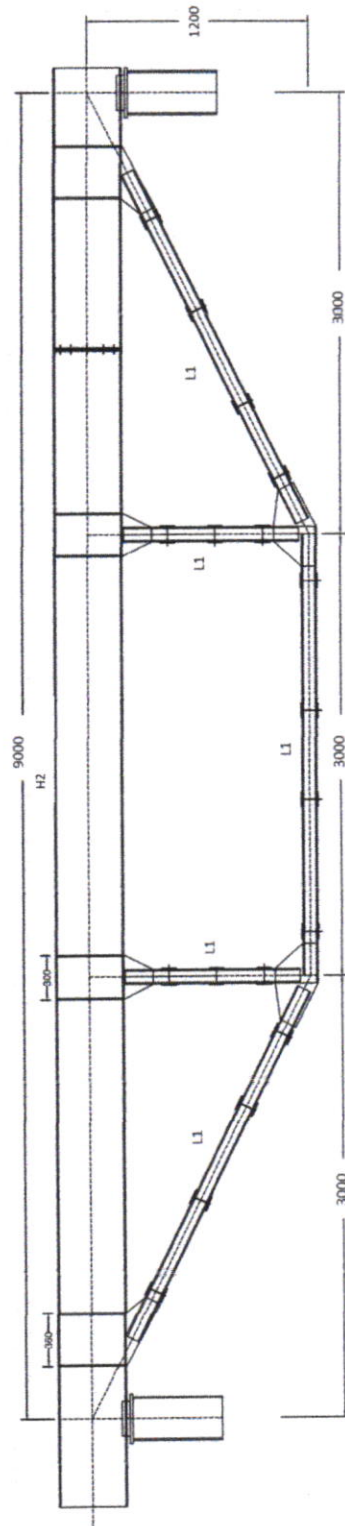
L1 = Double L 60.60.6, Baut dipakai =  $\phi 16$   
H2 = IWF 250.150.6.9

Figure 7. Structure Schematic for 'CS1' - C

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L1 = Double L 60.60.6, Baut dipakai =  $\phi 16$   
H2 = IWF 250.150.6.9

Figure 8. Structure Schematic for 'CS1' - D

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<p>2.2 <u>Documentation</u> The contractors shall provide the following documents in Bahasa:</p> <ul style="list-style-type: none"> <li>• Drawing of the final structure design</li> <li>• Bill of material for the materials used</li> </ul> <p>2.2 <u>Structure Design</u> The design of the structure shall refer to the design of existing crane structure TDP owned by Pindad ('CS1' TDP). A modification from the original design are subject to Pindad's approval through discussion between the contractors and Pindad. A more detailed 'CS1' structural design that are not shown in this specification document can be requested from Pindad.</p> <p>2.4 <u>Structural Materials</u></p> <ol style="list-style-type: none"> <li>1. The contractors shall provide a complete list of the materials used to build the structure.</li> <li>2. The materials used to build the structure shall be free of defect (minor surface defect are tolerable) and comply with the specification agreed by both parties.</li> <li>3. The contractor shall conduct and pass the compression test for the concrete material for structure foundation.</li> </ol> <p>2.4 <u>Additional Requirements</u></p> <ul style="list-style-type: none"> <li>• The contractors shall have extensive experience in building free-standing structure for electric overhead crane with 10 ton or higher capacity.</li> <li>• The structure shall be fully compatible with the particular electric overhead crane that will be used by Pindad.</li> </ul> <p><b>3. <u>QUALITY ASSURANCE PROVISIONS</u></b></p> <p>3.1 <u>Conformance to requirements</u> The supplier shall be responsible to ensure that the supplied components conform to all the requirements stated in paragraph 3 of this specification and Pindad quality requirements.</p> <p>3.2 <u>Commissioning Procedures</u></p> <p>3.2.1 <u>Visual Inspection</u> Checking for the completeness (quality and quantity) of parameters as:</p> <ol style="list-style-type: none"> <li>1. The quality of the material, connection, and joints of the structures.</li> <li>2. The conformity to the requirements and structural design.</li> <li>3. Drawing and other documentations.</li> </ol> <p>3.2.2 <u>Functional Inspection</u> Checking for the integrity and quality of the structure by moving the overhead crane (with and without load) along the length of the runway.</p>		
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