

Item No.	Qty	Description
1	5	Steel PF180x75x1000
2	16	Steel 100x75x6Ux1500
3	10	Steel PF200x75x2303.98
4	8	24mm Toughened Laminated Glass ...
5	2	24mm Toughened Laminated Glass ...
6	8	Steel PF150x75x1500
7	4	Steel 100x75x6Ux1000
8	2	50x3mm Rubber Gasket

R.P.E.Q 20155
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STRUCTURAL STEELWORK:

1. All steelwork shall be executed in accordance with the current editions of the following Australian Standards: AS 4100 - Steel Structures; AS/NZS 4600 - Cold-formed steel structures; AS/NZS 1554.1 - Structural Steel Welding - Welding of Steel Structures
2. All steel shall be as specified in Table 1.3 U.N.O.
3. The steelwork Sub-Contractor's shop drawings are to be submitted to the Engineer for approval prior to commencement of fabrication.
4. Weld preparation shall include as a minimum, removing all dirt and deleterious matter and power wire brush cleaning to AS1627.2 class 2
5. All welds and consumables to be in accordance with AS1554.1 UNO.
6. Weld consumables to be E49XX (fuw = 490MPa) UNO.
7. All welds to be 6mm continuous fillet welds, Category SP UNO.
8. All butt welds to be complete penetration, Category SP UNO.
9. Weld inspection to be 100% visual scan in accordance with AS1554.1 UNO.
10. Weld notation is as per Table 1.1
11. Corrosion protection - The steelwork is to be cleaned to an AS1627 class 2.5 preparation and given 1 coat of oxide zinc phosphate primer to give a dry film thickness of 75mm before dispatch, unless the steel is to be encased in concrete. All external steelwork shall be galvanised prior to installation.
12. Where encased in concrete, the steelwork shall be wrapped with 5.0mm wire at 150mm pitch with (50 clear between steelwork and wire, 40min. cover to wire).
13. The steel fabricator shall provide all bolts, cleat plates and consumables necessary for the fabrication and erection of the steelwork as noted or implied on these drawings, fabrication drawings, or in the specification.
14. Bolted connection notation is as per Table 1.1
15. All bolted connections to include a washer of similar stress grade to the bolt and nut. Bolt threads shall not extend across the shear plane. All bolts nuts and washers shall be galvanized.
16. All details, gauge lines etc. where not specifically indicated on the drawings are to be in accordance with AISC Design Capacity Tables for structural steel and AISC Standardised Structural Connections.
17. Bolt hole diameters shall be 2mm larger than the nom. bolt dia. for bolts up to 24mm dia., and 3mm larger for a bolt of greater diameter UNO.
18. Minimum bolt edge distances are specified in Table 1.2
19. When shop splices are necessary in beams, trusses or columns, the position of the splices is to be approved by the Engineer prior to commencement of fabrication.
20. Where hollow sections of same external size, and with differing wall thickness are specified, the wall thickness shall be clearly marked on the section during fabrication for identification.

STRUCTURAL STEELWORK cont:

TABLE 1.1 - WELD AND BOLT DESIGNATION

Designation: Description
fw: Fillet weld
cfw: Continuous fillet weld
bw: Butt weld
cpbw: Complete penetration butt weld.
M12 4.6/S: M12 Commercial bolts, grade 4.6, 'snug tight'
M16 8.8/S: M16 High strength structural bolts, grade 8.8, 'snug tight'
M20 8.8/TB: M20 High strength structural bolts, grade 8.8, either friction type joint (TF) or bearing type joint (TB) as specified, both types fully tensioned to AS 1552.

STRUCTURAL STEELWORK cont:

TABLE 1.2 - STRUCTURAL BOLTING

Edge Cut Method [Min. Bolt Edge Dist.]
Sheared or hand flame cut edges [1.75 x bolt dia.]
Machine flame cut, sawn or planed edge [1.5 x bolt dia.]
Rolled edge of a rolled section [1.25 x bolt dia.]
Minimum pitch between bolt centres [2.5 x bolt dia.]

TABLE 1.3 - STEEL MATERIAL SPECIFICATION

Component: Standard
Plate: 250grade Hot Rolled Plate to AS/NZS 3678
Bar, UB, UC, PFC, EA, UA: 300grade Hot Rolled to AS/NZS 3679.1
RHS, SHS: C350grade to AS/NZS 1163

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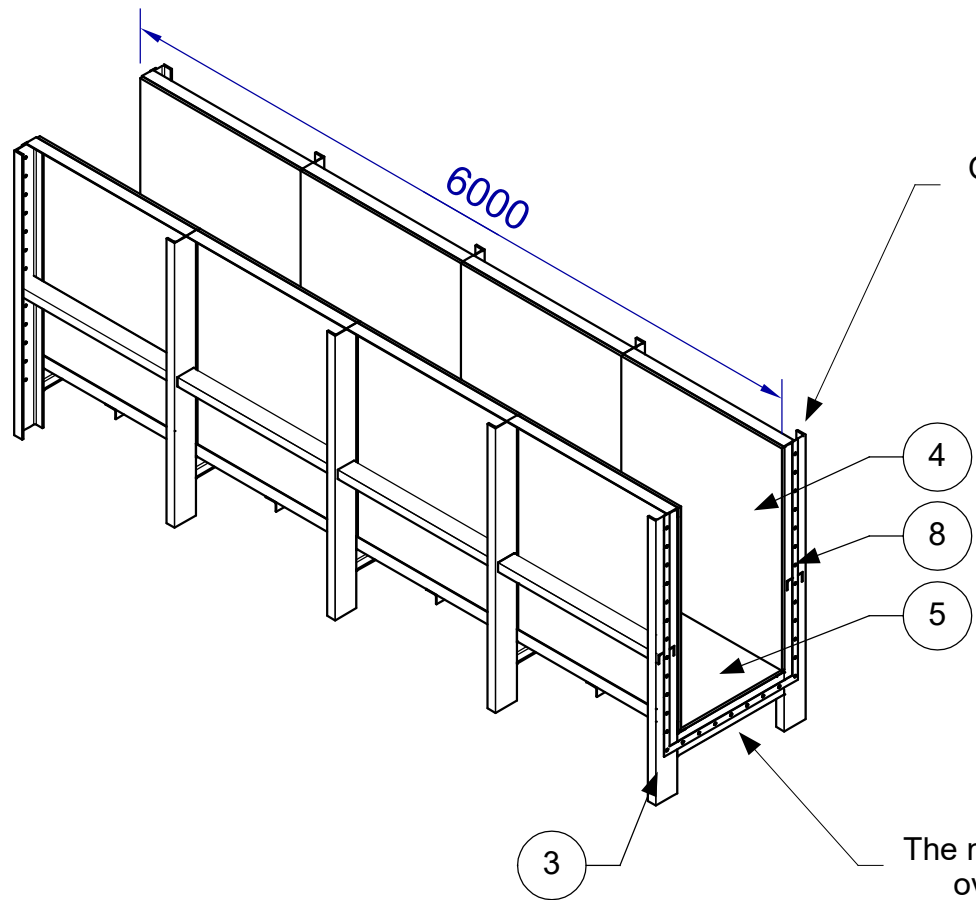


Designed:
 Drawn:
 Checked:
 Date: 10/15/2020 3:00 PM
 Scales:

Hydraulics Laboratory
 Wave Flume Module

General Arrangement

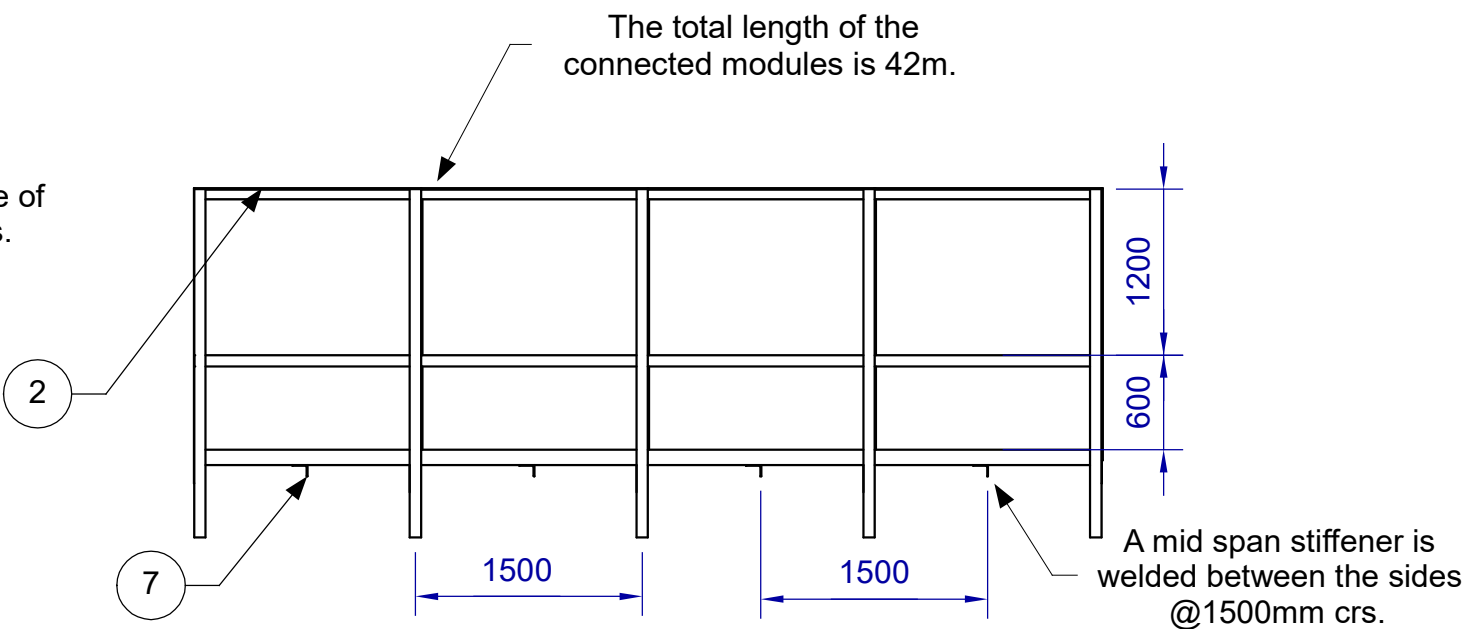
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Dwg. No.	20073 - 1
Revision No. 1	



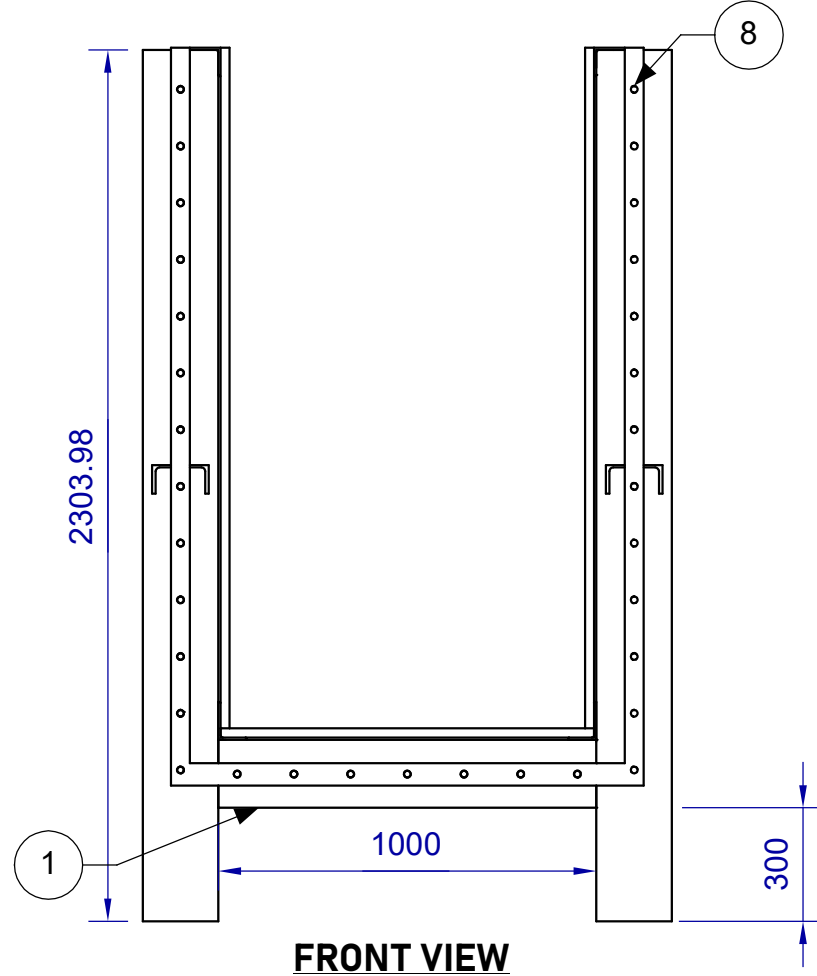
ISOMETRIC VIEW

One single 6m module of a total of 7 modules.

The modules bolt together over a rubber seal.



SIDE VIEW



FRONT VIEW

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<p>EngiStruct Pty Ltd. Consulting Structural Engineers 176 Benjamin Place, Lytton, QLD 4169 admin@engistruct.com.au (07) 3348 2644</p>		Designed:	<p>Hydraulics Laboratory Wave Flume Module</p>	Sheet No. 2	A3
		Drawn:		Dwg. No. 20073 - 2	
		Checked:		Revision No. 1	
		Date: 10/15/2020 3:00 PM			
Scales:			<p>Detailed View</p>		