Test Report No. 719187251-MEC-10/OHH
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SUBJECT:

Construction check and tensile test on pressed steel panel tank submitted by Hydro Dynamic Engineering Pte Ltd.

TESTED FOR:

Hydro Dynamic Engineering Pte Ltd
45 Kallang Pudding Road
#09-11 Alpha Building
Singapore 349317

Attn: Mr. Patrick Tan

SAMPLE SUBMISSION DATE:

13 OCT 2010

TEST METHOD:

SS22 : 1997 Specification for pressed steel sectional rectangular tanks.

SAMPLE DESCRIPTION:

One piece of "HYDRO" brand (refer to Photo.1) pressed steel sectional tank panel of dimensions – (1220mm x 1220mm x 5mm) and one mild plate (300mm x 300mm x 5mm) was submitted for following tests:

1) Dimensional measurements
2) Mechanical test

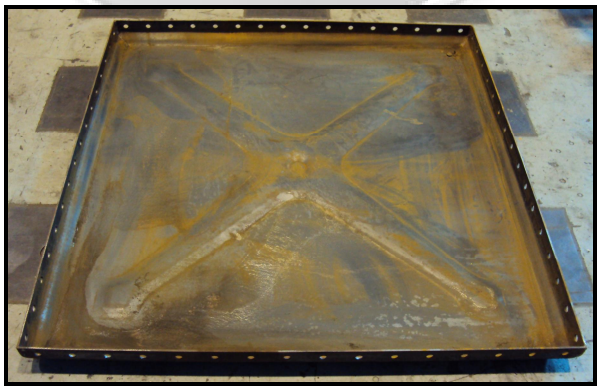

Photo 1

TÜV SÜD PSB

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TEST RESULTS:

(1) Dimensional measurement

Sample Reference / Item Measured	"Hydro Dynamic" Brand (1220mm X 1220mm X 5mm)				SS22:1997 Requirements
	Side A	Side B	Side C	Side D	
Pitch of holes [range (mm)]	75.2 to 76.0	75.2 to 76.1	75.4 to 76.0	75.3 to 76.1	Max. 76.2
Width of flange at 45˚ to place of panel (mm)	45.1	45.2	45.2	45.4	Min. 45
Width of flange at 90˚ to place of panel (mm)	46.3	46.3	46.8	46.8	Min. 45
Angle between plane of flange at 45˚ to plane of panel (degree)	45	45	45	45	45˚
Angle between plane of flange at 90˚ to plane of panel (degree)	91	91	92	93	90˚
Length of side (mm)	1220	1220	1220	1220	1220 (nominal)

Note: The steel panel was measured as submitted.

TEST RESULTS:

(2) Mechanical test of steel plate

Type of test	Sample Reference	Mild steel plate (5mm thick)
Tensile	Measured thickness (mm)	4.89
	Measured width (mm)	12.62
	Cross sectional area, S_0	61.74
	Yield point load (kN)	21.8
	Yield strength (N/mm²)	353
	Maximum load (kN)	29.7
	Tensile strength (N/mm²)	480
	Elongation on 5.65 $\sqrt{S_0}$ gauge length (%)	33
	Position of fracture	Between gauge marks

Oh Heng Hwa
Engineer

Chua Peck Cheong
Product Manager
Polymer & Industrial Products
Mechanical Centre

PSB Singapore

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March 2010