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ALARFAJ HOLDING

شركة عبداللطيف العرفج واخوانه القابضة

Abdullatif Al-Arfaj & Brothers Holding Co.

COMMERCIAL REGISTRATION

2257027567

INDUSTRIAL LICENSE

2055

COMPANYP REQUALIFICATION

SPI

المصنع السعودي لصناعة البلتروجن

SAUDI PULTRUSION INDUSTRIES

ACM ISO 9001 REGISTERED

UKAS MANAGEMENT SYSTEMS 245

Providing solutions
to design problems
for engineers

www.saudi-pultrusion.com

COMPANY PREQUALIFICATION

CONTENTS

OVERVIEW

After careful planning, study and research, the Abdullatif Al-Arfaj & Brothers Holding Co., invested in multi million Saudi riyals to form the first and only state of the art pultrusion factory in Saudi Arabia and Middle East named Saudi Pultrusion Industries.

Saudi Pultrusion Industries (SPI) with its technical partner, Pacific Composites of Australia, has brought in modern technology and machinery that manufacture Fiberglass Reinforced Composite Materials (FRP or GRP) which offer a combination of benefits and advantages not available in steel, aluminium or timber.

FRP profiles are now widely recognized and accepted in the engineering and construction field as an alternative replacement and substitute to the traditional materials where long term performance in an aggressive and corrosive environment is required. Because of their specific unique characteristics and properties pultruded profiles can be used in a wide range of applications.

SPI offers solution to the engineering design problem and high quality products that meet the ASTM and other international standards hence the company has been awarded the EN ISO 9001:2000.

PULTRUSION PROCESS

The Pultrusion process is a continuous process like extrusion (which makes plastic pipes or aluminum window frames, etc.).

The difference between the two is that Extrusion pushes the material through a hardened steel die while Pultrusion, as it's name implies, pulls the continuous fiber reinforcement in roving or mat/roving form through a resin bath where each fiber is coated with a specially formulated resin matrix.

The fully "wet-out" fibers are then drawn into a heated steel die. The thermoset resin cure is initiated by the heat from the die which acts on the catalyst in the resin formulation. The rate of the chemical reaction is controlled by heating and cooling zones along the length of the die. The high strength Pultruded profile produced is ready to use as it exits the pultrusion machine.

Although the concept of Pultrusion seems quite simple, there is a delicate balance that has to be maintained between materials is, temperature and production speed.

PROCESS ADVANTAGE

The process provides maximum Flexibility in the design of pultuded FRP profiles. Since the process is continuous, length variations are unlimited to shipping capabilities.

Specific strength characteristics can be designed into the composite, optimizing laminate performance for a particular application by strategic placement of high performance reinforcements. Color is uniform throughout the cross section of the profile, eliminating the need for many painting requirements.

RAW MATERIALS USED IN PULTRUSION PROCESS

RESIN

Selected high performance polyester resins are combined with suitable fillers, catalysts, UV inhibitors and pigments to formulate the resinous matrix binding the fibers together and providing the structural corrosion resistance and other properties required. Although the vast majority of application can be serviced by the variety of polyester resins available, certain application requirements of higher strength or corrosion resistance can be satisfied with the selection of vinyl ester

MAT

Continuous strand mat provides the most economical method of obtaining a high degree of transverse, physical properties. The mats are layered with roving, this process forms the basic compositions found in most pultruded products. The ratio of mat to roving determines the relationship of transverse to longitudinal physical properties.

ROVING

Fiberglass roving provides the high longitudinal strength of pultruded products. The amount and location of these reinforcements can be determined in the design stage can be alter the subsequent physical properties of the finished product.
Roving also provides the tensile strength needed to pull the other reinforcements through the die; it is a necessary in the profile design.

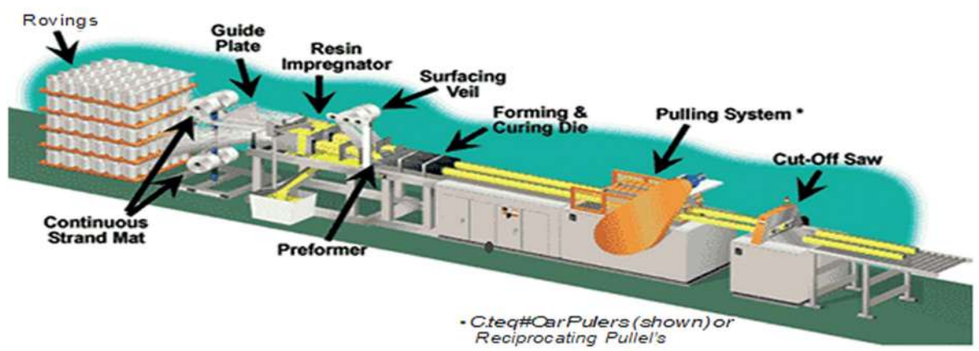
VEIL

Since pultrusion is a low-pressure process, fiberglass reinforcements normally appear close to the surface of the product. These can affect the appearance, corrosion resistance or handling of the products. Surface veils can be added to the laminate construction to displace the reinforcement from the surface adding a resin-rich finish to the profile. The two most commonly used veils are E-glass and polyester.

WHAT IS PULTRUSION?

Generally, pultrusion is one process or method of producing composite materials, widely known as FRP (fibreglass reinforced plastics).

It is a continuous process using reinforcement in specially formulated thermosetting resin matrices.



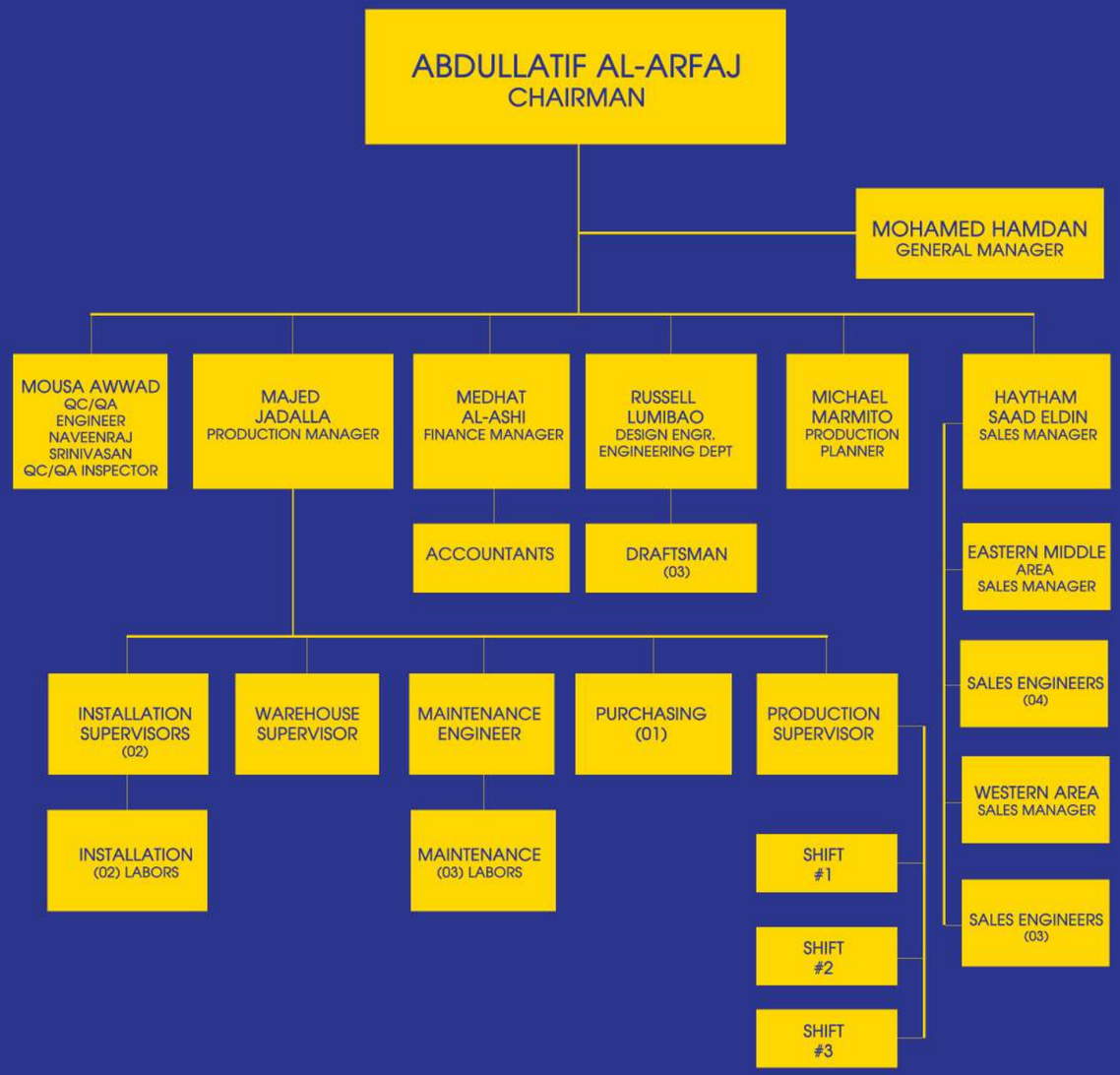
PULTRUSION PROCESS

• Pre selected reinforcement materials, such as fibreglass roving, mat and surface veil are drawn through a resin bath in which all materials are thoroughly impregnated with a liquid thermosetting resin.

The wet out fiber is formed to the desired shape and pulled into a heated steel die. Once inside the die, the resin cure is initiated by controlling precise elevated temperatures. It solidifies in the exact cavity shape of the die, as it continuously pulled by the pultrusion machine.

COMPANY
INFO RMATION

ORGANIZATIONAL CHART



COMPANY INFORMATION

COMPANY
SAUDI PULTRUSION INDUSTRIES

ADDRESS
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Branch Office
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Madina Road crossing korish Road
Al Humaidy Tower,5th floor, office 501
Tel.012 616 9906 Fax.012 691 2761

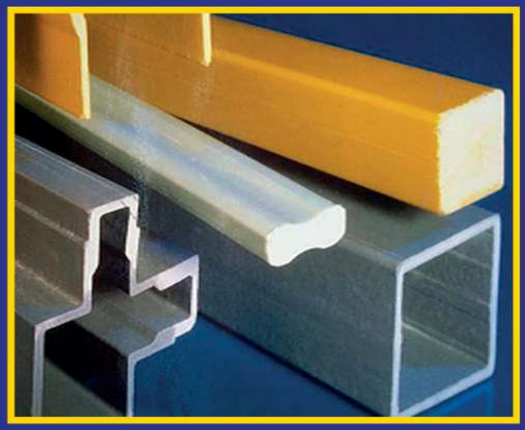
Commercial Registration
2257027567

Industrial License
2055

Name of Owner
MR. ABDULLATIF M. AL-ARFAJ
(100% Saudi National)

LIST OF PRODUCTS

- FRP/GRP (FIBERGLASS REINFORCED PLASTIC COMPOSITE PROFILES).
- FRP/GRP PULTRUDED GRATINGS & FRP/GRP MOLDED GRATING.
- FRP/GRP HANDRAILS.
- FRP/GRP LADDERS AND SAFETY CAGE.
- FRP/GRP CABLE TRAYS & LADDER COMPONENTS.
- FRP/GRP PLATFORMS & WALKWAYS.
- FRP/GRP COOLING TOWER COMPONENTS.
- FRP/GRP CORRUGATED SHEETS, FLAT SHEETS&CHECKERED PLATE SHEETS.
- FRP/GRP MARKER POST.



FIBERGLASS GRATING SYSTEM

FEATURE BENEFITS AND CHARACTERISTICS

□Chemical and Corrosion Resistance
The use of premium grade resins containing UV inhibitors and an outer reinforcing continuous strand mat topped by a non-glass surfacing tissue, optimum protection against corrosion and weathering can be achieved. It resist a wide range of aggressive acids, salts, alkalis and other chemical environments which can have disastrous effect on metallic grating systems.

□High Strength to Weight Ratio
Superior strength to weight ratio to steel or aluminum systems. It is highly resistance to fatigue, creep or permanent deformation.

□Lightweight and Manageable
The pultruded fiberglass used has a specific gravity of one fourth that of steel and two - thirds that of aluminum which considerably simplifies installation and handling.

□Non-Conductive
Fiberglass can be used safely in electrical work areas. Special support conditions to prevent electrolytic corrosion is not required.

□Transparent to Radio Frequency
Pultruded fiberglass do not interfere with electromagnetic and radio frequency transmissions.It can be safely applied in towers and other structures used in the transmission of such signals.

STANDARD POLYESTER (ISO) RESIN SYSTEM

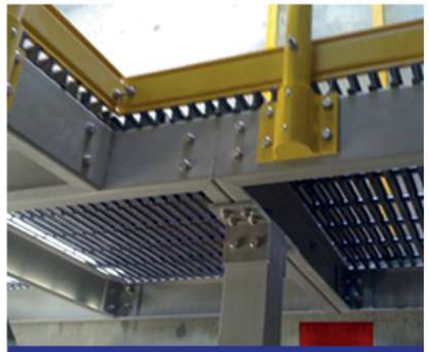
□The standard polyester resin system refers to a non flame retardant Isophathalic polyester resin system.
This resin system is manufactured in olive green and incorporates ultraviolet inhibitors. Polyester resins exhibit good corrosion resistance, good electrical properties, low thermal conductivity and external mechanical properties.

□Flame Retardant Polyester (ISOFR) Resin System.
This resin exhibits the same characteristics as the standard polyester resin system with a Flame spread rating of 25 or less when tested in accordance to ASTM E-84. The flame retardant resin is manufactured in gray and yellow.

□Flame Retardant Vinyl Ester (VEFR) Resin System.
This resin system is manufactured from vinyl ester resin which exhibit higher strength, improve strength and stiffness retention at elevated temperatures, and improved corrosion resistance. This system also meets a maximum FLame spread rating of 25 and produced in beige and yellow color.

All pultruded profiles used in grating system were made of premium grade ISOPHthalic polyester or vinyl ester resins and meet the fire retardancy requirements of UL94 V-0, ASTM D-635 and ASTM D-84. It contain nominally 60% E glass reinforcement.

FPR GRATING &SUPPORT @ VALVE&METERING CHAMBER

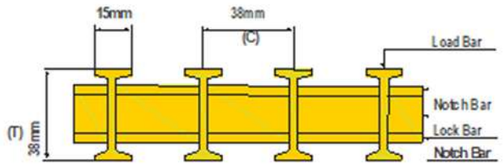


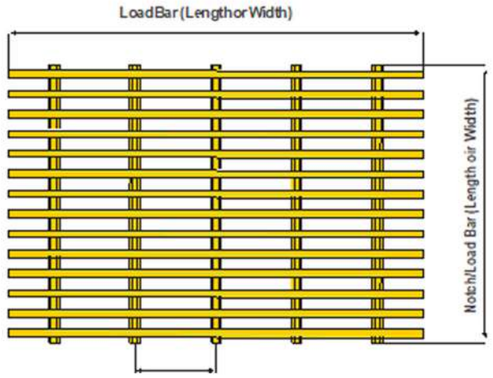
FPR SUPPORT SQUARE POST, ANGLE, BEAM AND CHANNEL

FPR FLOOR GRATING

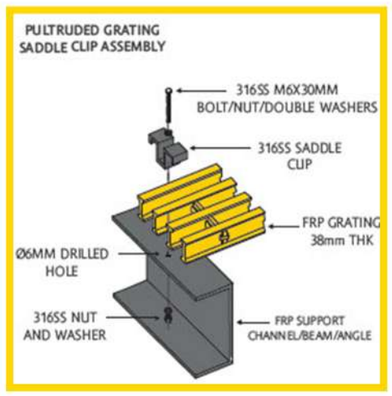
FRP GRATING TECHNICAL INFORMATION

Standard panel size are nominal 914mm(36") or 1219mm(48") wide by 3048mm(120") span. Other sizes are available to order to a maximum of 1219mm (48") wide by 6096mm (240") spans. Panel weight must be considered when ordering large panels. Special shape panels can be cut from standard width stock panels. Standard and fire retardant grating is made in safety yellow. Vinyl ester system for additional chemical resistance are beige in color. Other color can be made to order.

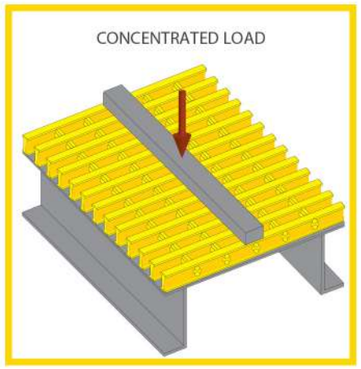


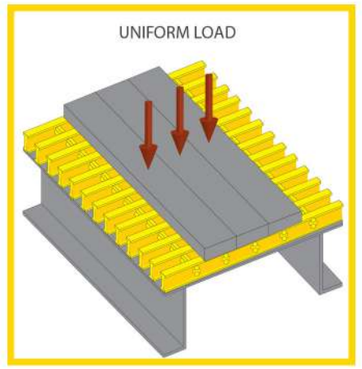


Series	Type	Grating Thickness (T)		Cross Tie Center		Load Bars per 300mm of Width	Load Bar Center (C)		% Open Area	kg/m²	lb/ft²
		(mm)	(in)	(mm)	(in)		(mm)	(in)			
400	400	38	1.5	305	12	12	25	1	40	24	4.9
	409	38	1.5	228	9	12	25	1	40	24	4.9
	406	38	1.5	152	6	12	25	1	40	25	5.1
	403	38	1.5	76	3	12	25	1	40		5.7
600	600	38	1.5	305	12	8	38	1.5	60	17	3.5
	609	38	1.5	228	9	8	38	1.5	60	17	3.5
	606	38	1.5	152	6	8	38	1.5	60	18	3.7
	603	38	1.5	76	3	8	38	1.5	60	21	4.3



FRP GRATING LOAD DEFLECTION TABLE



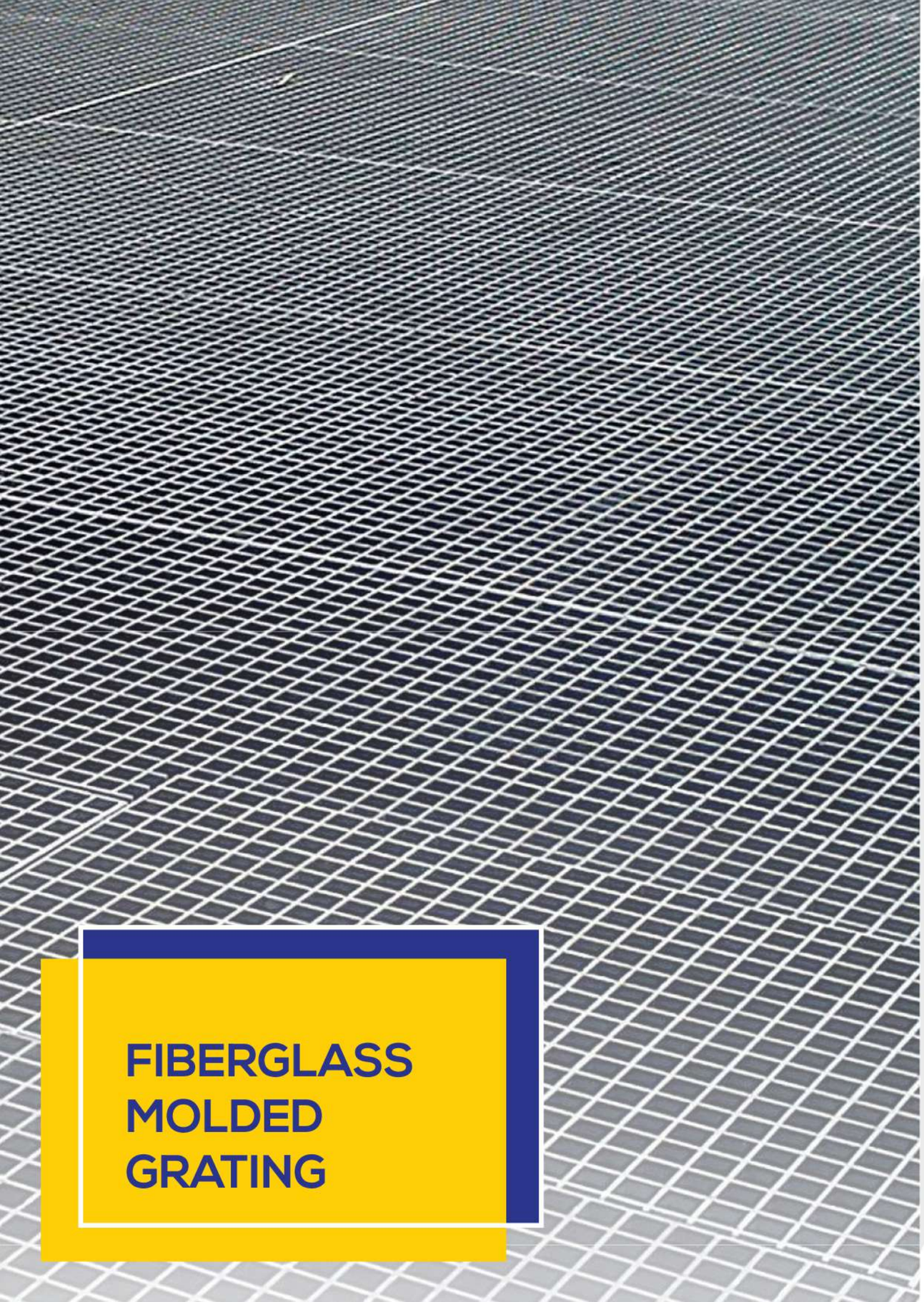


SERIES 600	CONCENTRATED LOAD							8 Load bars/300mm of Width	
	KiloNewtons							Load for Deflection	
Span (mm)	0.5	1	2	3	5	7	10	6.4mm	9.5mm
	Deflection (mm)							KiloNewtons	
300	*	*	*	0.30	0.50	0.70	1.00	13.70+	20.30+
450	*	0.30	0.60	0.89	1.49	2.08	2.96	13.70+	20.30+
600	*	0.47	0.93	1.40	2.34	3.27	4.67	13.70	20.30
900	0.57	1.15	2.31	3.46	5.77	8.08	11.54	5.55	8.23

SERIES 600	UNIFORM LOAD							8 Load bars/300mm of Width	
	KiloNewtons							Load for Deflection	
Span (mm)	2	3	4	5	7	9	12	6.4mm	9.5mm
	Deflection (mm)							KiloNewtons	
300	*	*	*	*	*	*	*	119.25+	177.00+
450	*	*	*	*	*	*	*	119.25+	177.00+
600	*	*	*	0.27	0.38	0.48	0.64	119.25	177.00
900	0.40	0.59	0.79	0.99	1.39	1.78	2.38	32.32	47.98

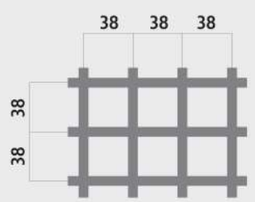
SERIES 400	CONCENTRATED LOAD							12 Load bars/300mm of Width	
	KiloNewtons							Load for Deflection	
Span (mm)	0.5	1	2	3	5	7	10	6.4mm	9.5mm
	Deflection (mm)							KiloNewtons	
300	*	*	*	*	0.33	0.46	0.66	20.60+	30.50+
450	*	*	0.40	0.60	0.99	1.39	1.97	20.60+	30.50+
600	*	0.31	0.62	0.93	1.56	2.18	3.11	20.60	30.50
900	0.38	0.77	1.54	2.31	3.85	5.39	7.69	8.32	12.35

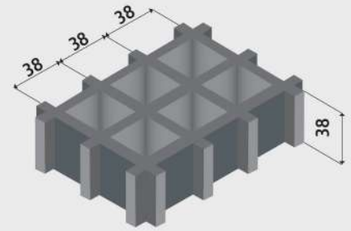
SERIES 400	UNIFORM LOAD							12 Load bars/300mm of Width	
	KiloNewtons							Load for Deflection	
Span (mm)	2	3	4	5	7	9	12	6.4mm	9.5mm
	Deflection (mm)							KiloNewtons	
300	*	*	*	*	*	*	*	180.00+	267.00+
450	*	*	*	*	*	*	*	180.00+	267.00+
600	*	*	*	*	*	0.32	0.43	180.00	267.00
900	0.26	0.40	0.53	0.66	0.92	1.19	1.58	48.50	72.00



FIBERGLASS MOLDED GRATING

FRP MOLDED GRATING LOAD DEFLECTION TABLE





H38 MESH SIZE
38MMx38MM

Bar Thickness (Top/Bottom)
7.0/5.0

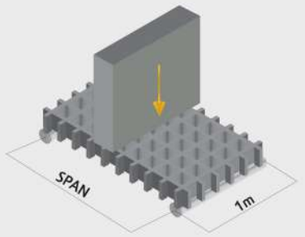
Distance Between Centers of Bearing Bar - 38mm

Open Area - 68%

Weight per Square Meter
19.5 kg/m^2

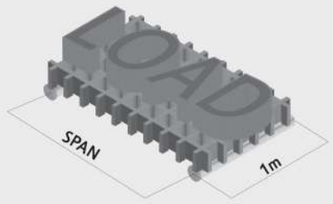
Standard Panel Sizes:
1220mm x 4000mm, 1220mm x 3660mm, 1220mm x 2440mm
915mm x 3050mm, 1524mm x 3050mm, 1254mm x 4000mm

FRP MOLDED GRATING



CONCENTRATED LINE LOAD TABLE
DEFLECTION IN mm

Deflection	kg/m						Break point
SPAN	75	150	300	450	600	750	
300	0.279	0.356	0.483	0.61	0.762	0.889	17116
600	0.356	0.66	1.245	1.85	2.464	3.073	8718
900	0.864	1.803	3.683	5.563	7.417	9.296	5817
1200	2.261	4.749	9.677	14.63	19.583	--	3755



UNIFORM LOAD TABLE DEFLECTION IN mm

Deflection	kg/m^2						
SPAN	240	480	980	1450	2450	3650	4880
300	0.254	0.305	0.381	0.457	0.7635	0.838	--
600	0.432	0.813	1.549	2.311	3.8354	5.74	--
900	1.702	3.454	6.959	10.465	17.475	--	--
1200	5.969	12.167	24.511	--	--	--	--

FIBERGLASS HANDRAIL SYSTEM

FEATURE BENEFITS AND CHARACTERISTICS

□Chemical and Corrosion Resistance

The use of premium grade resins containing UV inhibitors and an outer reinforcing continuous strand mat topped by a non-glass surfacing tissue, optimum protection against corrosion and weathering can be achieved. It resist a wide range of aggressive acids, salts, alkalis and other chemical environments which can have disastrous effect on metallic grating systems.

□High Strength to Weight Ratio

Superior strength to weight ratio to steel or aluminum systems. It is highly resistance to fatigue, creep or permanent deformation.

□Lightweight and Manageable

The pultruded fiberglass used has a specific gravity of one-fourth that of steel and two-thirds that of aluminum which considerably simplifies installation and handling.

□Non-Conductive

Fiberglass can be used safely in electrical work areas. Special support conditions to prevent electrolytic corrosion is not required.

□Transparent to Radio Frequency

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STANDARD POLYESTER (ISO) RESIN SYSTEM

□Standard Polyester (ISO) Resin System

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This resin system is manufactured from vinyl ester resin which exhibit higher strength, improve strength and stiffnes retention at elevated temperatures, and improved corrosion resistance. This system also meets a maximum flFlame spread rating of 25 and produced in beige and yellow color.

All pultruded profiles used in handrail system were made of premium grade ISOPHthalic polyester or vinyl ester resins and meet the fire retardancy requirements of UL94 V-0, ASTM D-635 and ASTM D-84. It contain nominally 60% E glass reinforcement.

FRP ROUND TUBE HANDRAIL @ SEAWAGE TREATMENT PLANT

FRP ROUND TUBE HANDRAIL @ VALVE CHAMBER AREA

FRP SQUARE TUBE HANDRAIL FOR FRP STAIRCASE

FRP HANDRAIL TECHNICAL INFORMATION

1.0 LOADING REQUIREMENTS

1.1 SPI handrail system is designed to directly meet the specified loading requirements of the Occupational Safety and Health Administration (OSHA) federal register, volume 39, no. 125, section 1910.27, " Fixed Handrails "minimum liveload requirement of a 200lb concentrated load at any-point or uniform load of 75kg/m with a safety factor of 4.0.

1.2 Load/ deflection test are conducted at SPI own QC premises using the handrail horizontal & vertical deflection test.

2.0 HANDRAIL MATERIALS

2.1 SPI handrail system has 2 types the round handrail and square tube handrail.

- Round type handrail consist of 50x3.2mm round tube for top/ midle rail and post . Top and middle rails shall be connected using tee and cross connector. Kickrail shall be of 100x5mmthk and round tube using side or base plate connector.
- Square type handrail consist of 55x6mm square tube for post & rails. Top and middle rails shall be connected using 45x3mm connector. Kickrail shall be 100x5mm thk and mounted using side or base plate.

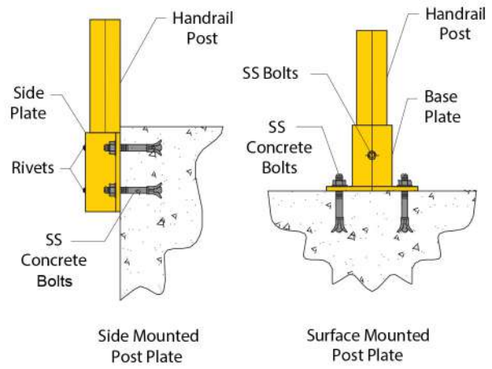
2.2 Type SS bolts/nuts/washers shall be provided for handrail assembly and fixation.

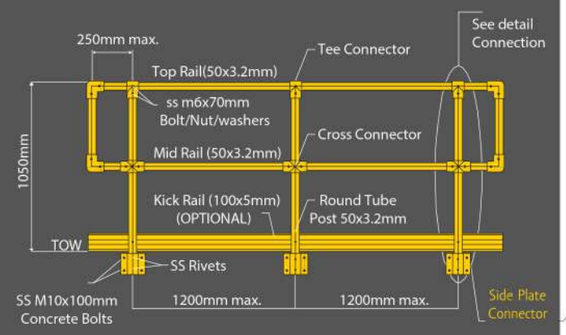
2.3 Laminates shall have no exposed glass, voids or dry glass.A synthetic surface veil as the outermost layer and UV inhibitor in the resin shall be presented to resist ultaviolet degradation.

3.0 HANDRAIL STANDARD TECHNICAL DATA

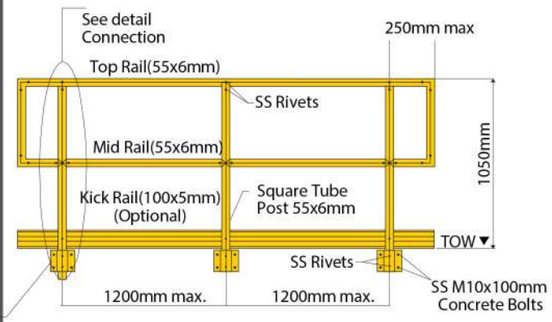
3.1 Vertical post spacing - 1200mm max.
3.2 Inclined post spacing - 1200mm max.
3.3 Post locations shall be no greater than 450mm nor less than 250mm from change in handrail direction.
3.4 Horizontal handrail height standard is 1050mm.
3.5 Inclined handrail height standard is 900mm.

TYPES OF POST INSTALLATION DETAILS





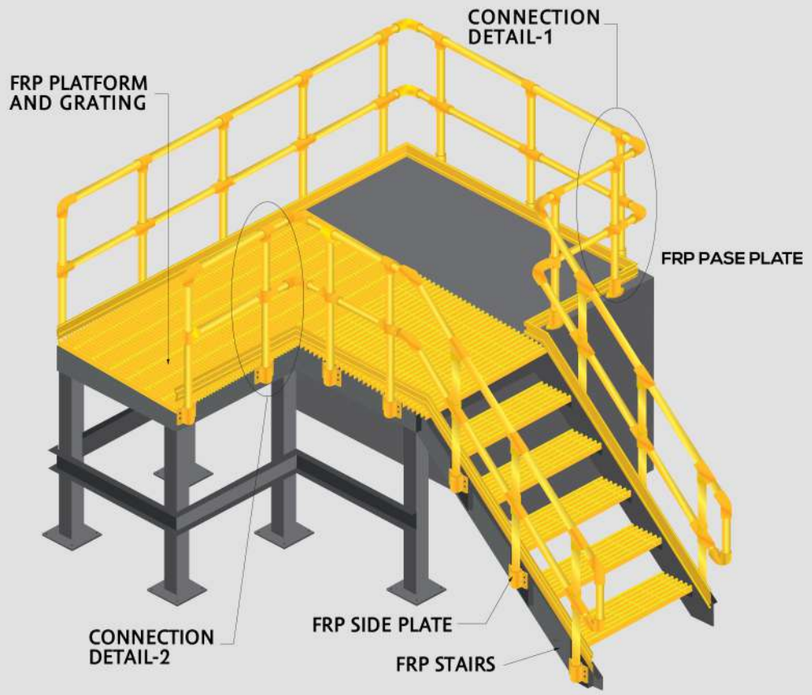
ROUND TUBE INSTALLATION DETAILS

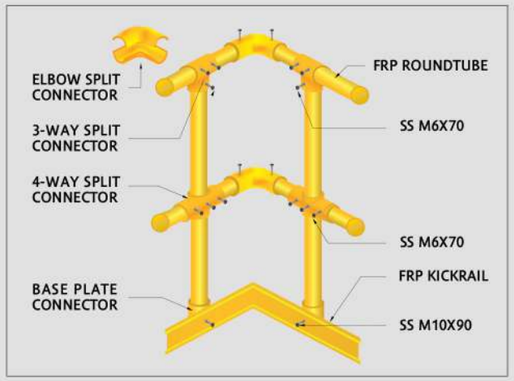


SQUARE TUBE INSTALLATION DETAILS

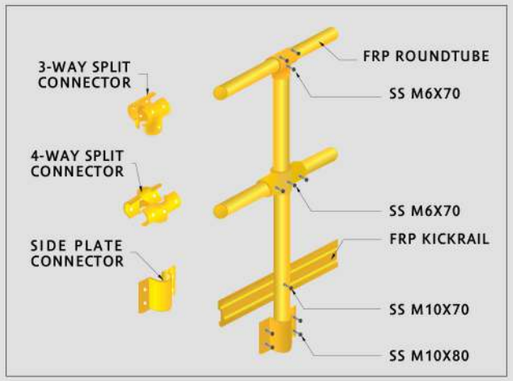
ROUND TUBE HANDRAIL INSTALLATION DETAILS

HANDRAIL DATA:
TUBE SIZE: Ø50mm 3mm THICKNESS





CONNECTION DETAIL-1



CONNECTION DETAIL-2

FIBERGLASS LADDER AND CAGE SYSTEM

All pultruded profiles used in ladder and safety cage were made of premium grade isophathalic polyester or vinyl ester resins and meet the fire retardancy requirements UL94 V-0, ASTM D-635 and ASTM D-84. It contain nominally of 60% E glass reinforcement.

FEATURE BENEFITS AND CHARACTERISTICS

□Chemical and Corrosion Resistance
The use of premium grade resins containing UV inhibitors and an outer reinforcing continuous strand mat topped by a non-glass surfacing tissue, optimum protection against corrosion and weathering can be achieved. It resist a wide range of aggressive acids,salts,alkalis and other chemical environments which can have disastrous effect on metallic grating systems.

□High Strength to Weight Ratio
Superior strength to weight ratio to steel or aluminum systems. It is highly resistance to fatigue, creep or permanent deformation.

□Lightweight and Manageable
The pultruded fiberglass used has a specific gravity of one-fourth that of steel and two-thirds that of aluminum which considerably simplifies installation and handling.

□Non-Conductive
Fiberglass can be used safely in electrical work areas. Special support conditions to prevent electrolytic corrosion is not required.

□Transparent to Radio Frequency
Pultruded fiberglass do not interfere with electromagnetic and radio frequency transmissions.It can be safely applied in towers and other structures used in the transmission of such signals.

STANDARD POLYSTER (ISO) RESIN SYSTEM

□Standard Polyester (ISO) Resin System
The standard polyester resin system refers to a non flame retardant isophthalic polyester resin system. This resin system is manufactured in olive green and incorporates ultraviolet inhibitors. Polyester resins exhibit good corrosion resistance, good electrical properties, low thermal conductivity and external mechanical properties.

□Flame Retardant Polyester (ISOFR) Resin System
This resin exhibits the same characteristics as the standard polyester resin system with a flame spread rating of 25 or less when tested in accordance to ASTM E-84. The flame retardant resin is manufactured in gray and yellow.

□Flame Retardant Vinyl Ester (VEFR) Resin System
this resin system is manufactured from vinyl ester resin which exhibit higher strength, improve strength and stifness retention at elevated temperatures, and improved corrosion resistance. this system also meets a maximum flame spread rating of 25 and produced in beige and yellow color.

FRP LADDER @ SEAWATER INTAKE VALVE

FRP LADDER WITH SAFETY CAGE @ HYPOCHLORITE BUILDING

FRP LADDER WITH SAFETY CAGE @ VALVE CHAMBER

FRP LADDER AND SAFETY CAGE TECHNICAL INFORMATION

1.0 LOADING REQUIREMENTS

1.1 SPI ladder system is designed to directly meet the specified loading requirements of the Occupational Safety and Health Administration (OSHA) federal register, volume 39, no. 125, section 1910.27, " Fixed Ladders " minimum live load requirement of a 200lb concentrated load at the mid-point of the rung with a safety factor of 4.0.

1.2 Load/ Deflection test are conducted at SPI own QC premises using the Ladder Rail Horizontal Beam deflection test.

2.0 LADDER ARRANGEMENT AND DIMENSION

2.1 SPI ladder system consist of ladder side post using square tube 45x6mm thickness and rails using rung tube diameter 32mmx3mm thickness continuously fluted to provide a non-slip surface. Rungs that are gritted as a secondary operation shall not be permitted. Ladder wall and floor mounting shall be fabricated in pultrusion system.

2.2 All rungs shall be both attached to the ladder with notch bar insertion and chemically bonded using formulated resin glue.

2.3 Ladder and Safety Cage component shall be in polyester or vinyl ester fire retardant resin formula in a safety yellow color.

2.4 Type SS bolts/nuts/washers shall be provided for attaching vertical bars to hoop, cage bracket to ladder, and wall bracket to ladder.

2.5 Cage hoops, cage brackets and vertical bars shall be manufactured by open mold hand lay-up process.

3.0 LADDER STANDARD TECHNICAL DATA

3.1 Outside width (outside rail to rail) - 540mm.

3.2 Inside width (inside rail to rail) - 450mm

3.3 Rung to rung center spacing - 300mm

3.4 Wall Bracket Spacing (center to center) -maximum 1500mm.

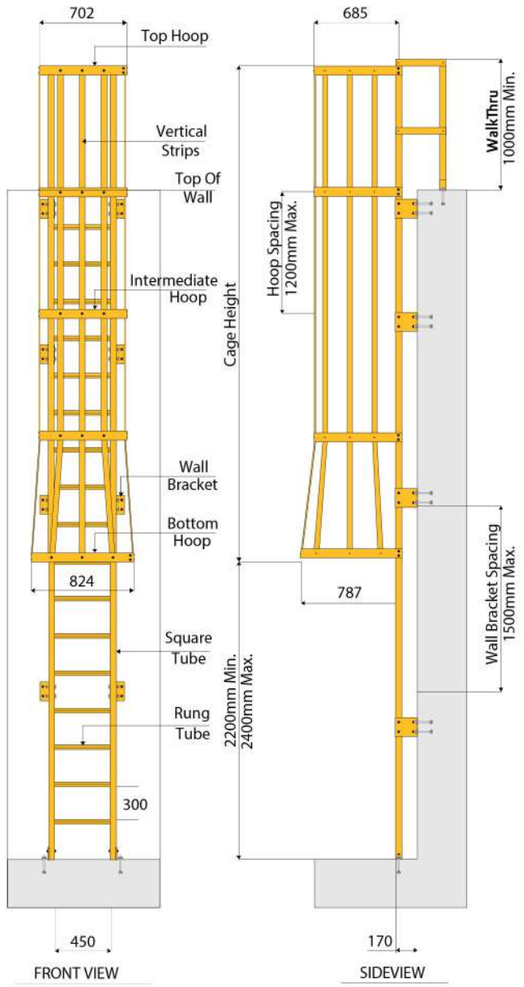
4.0 SAFETY CAGE STANDARD TECHNICAL DATA

4.1 Cage shall begin minimum of 2200mm to maximum 2400mm above base of ladder (floor).

4.2 Cage shall not be less than 685mm of width

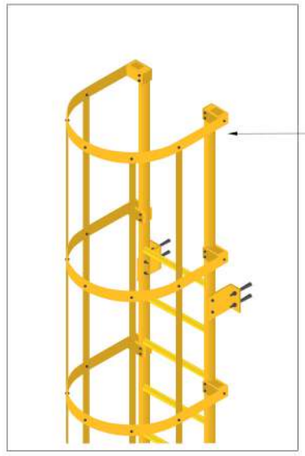
4.3 Cage to extend minimum of 1000mm above top of landing.

4.4 Cage hoop to hoop spacing (center to center) is maximum of 1200mm.



ITEMS	DESCRIPTION
Top Hoop	685mm from center line of rung to inside hoop
	70mm wide x 6mm thickness
Intermediate Hoop	685mm from center line of rung to inside hoop
	70mm wide x 6mm thickness
Bottom Hoop	787mm from center line of rung to inside hoop
	70mm wide x 6mm thickness
Vertical Strips	40mm wide x 6mm thickness
	maximum spacing of 45° around cage
Wall Brackets	150mmx76mmx8mm thickness
	170mm from wall to end rail

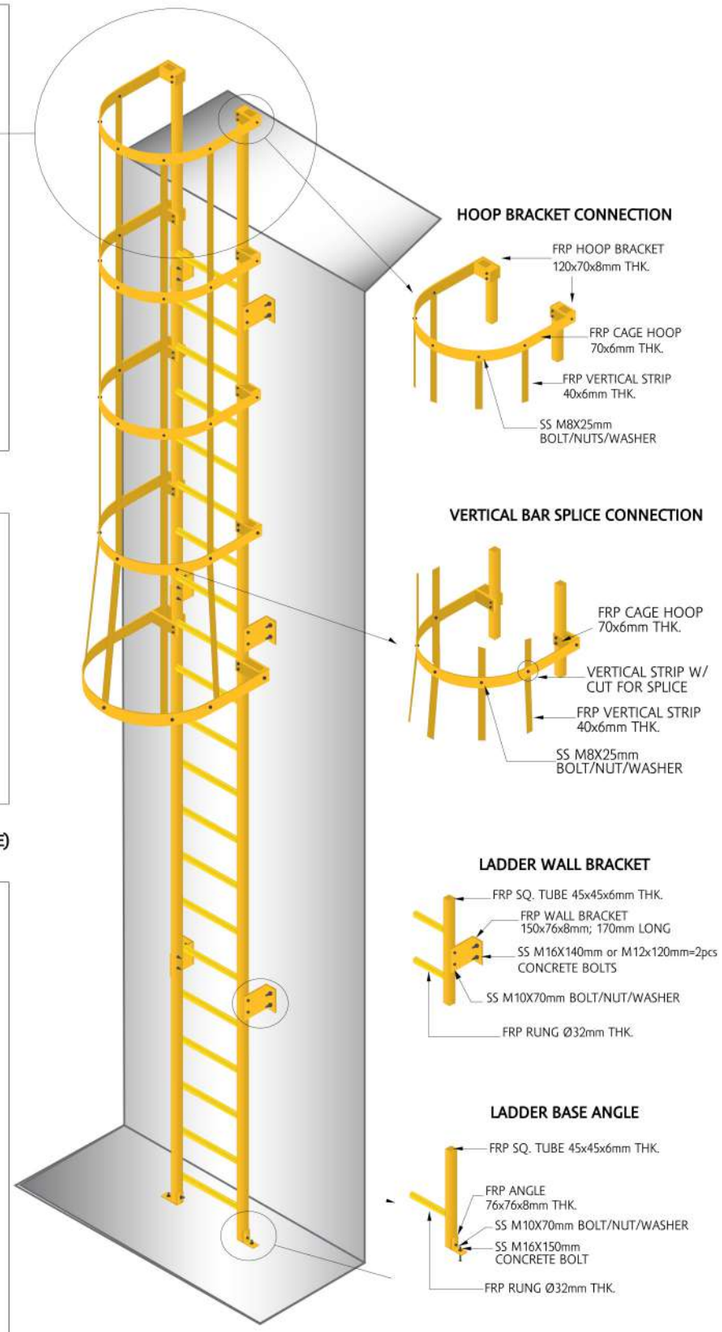
LADDER WITH SAFETY CAGE TYPICAL INSTALLATION DETAILS



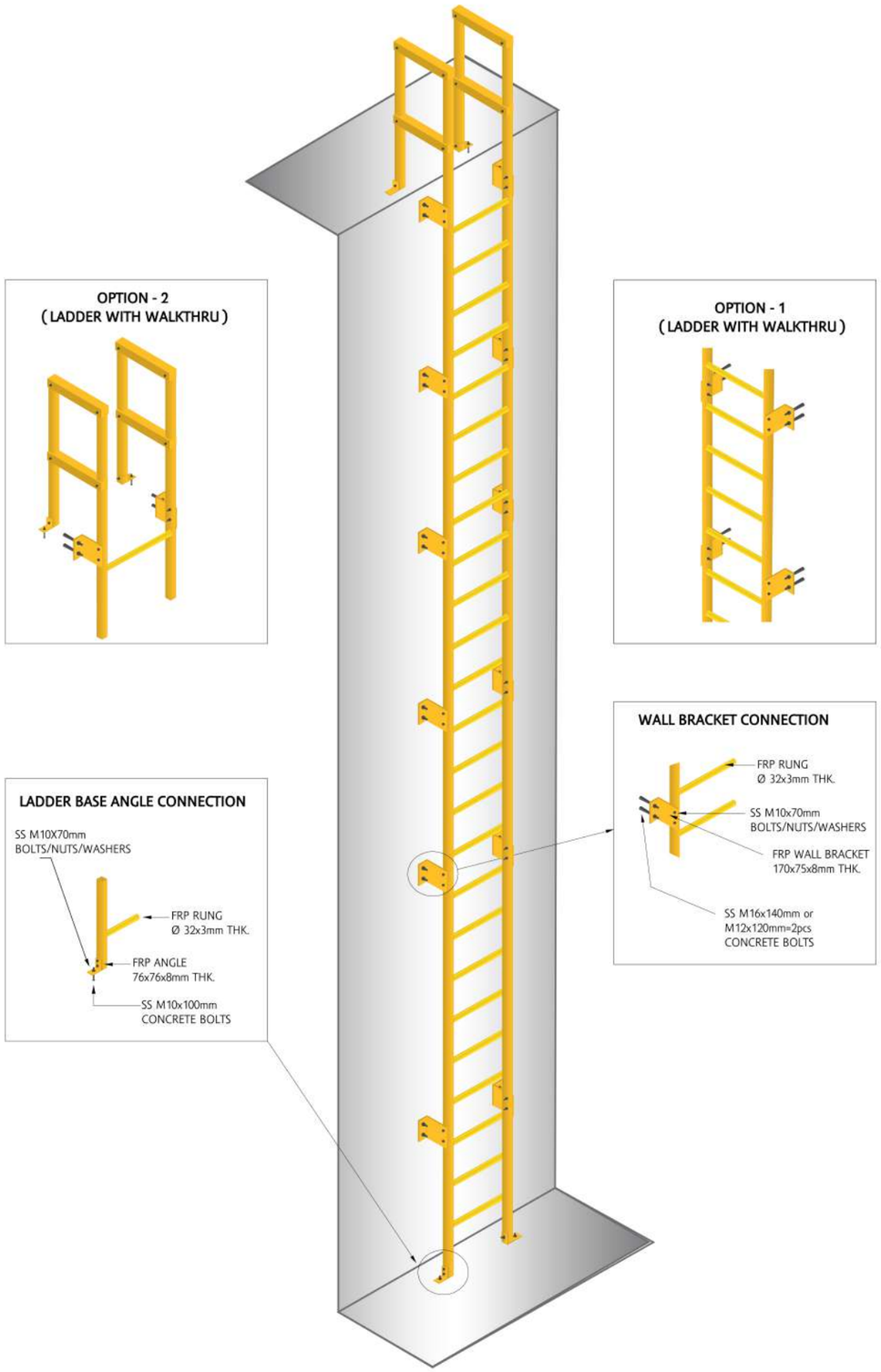
OPTION-1
(LADDER WITH EXTENDED SAFETY CAGE)

OPTION-2
(LADDER WITH STANDARD SAFETY CAGE)

OPTION-3
(LADDER WITH SAFETY CAGE & WALKTHRU)



LADDER TYPICAL INSTALLATION DETAILS



STANDARD RESIN SYSTEM FOR STRUCTURAL SHAPES

•.STANDARD POLYESTER (ISO) RESIN SYSTEM
The standard polyster resin system refers to a NON FLAME RETARDANT isophathalic polyester resin system. The resin system is manufactured in olive green and incorporates ultraviolet inhibitors.Polyster resins exhibit good corrosion resistance, good electrical properties, low thermal conductivity and excellent mechanical properties.

•.FLAME RETARDANT POLYESTER (ISOFR) RESIN SYSTEM
this resin exhibits the same characteristics as the Standard Polyester resin system with a flame spread rating of 25 or less when tested in accordance to ASTM E-84. The FLAME RETARDANT resin is manufactured in gray and yellow.

•.FLAME RETARDANT VINYL ESTER {VEFR) RESIN SYSTEM
This resin system is manufactured from vinyl ester resin which exhibits higher strength, improves strength and stiffness retention meets a maximum flame spread rating of 25 and produced in beige and yellow colour.

•.ELEVATED TEMPERATURES EFFECTS
The approximate retention of mechanical properties at elevated temperature are:

	TEMPERATURE	ISO/ISOFR	VEFR
ULTIMATE STRESS	100 **D**	85 %	90 %
	125 **D**	70 %	80 %
	150 **D**	50 %	80 %
	175 **D**	Not Recommended	75 %
	200 **D**	Not Recommended	50 %

	TEMPERATURE	ISO/ISOFR	VEFR
MODULUS OF ELASTICITY	100 **D**	100 %	100 %
	125 **D**	90 %	95 %
	150 **D**	85 %	90 %
	175 **D**	Not Recommended	88 %
	200 **D**	Not Recommended	85 %

MATERIALS PROPERTIES

Tables below are typical coupon properties of structural shapes as per the referenced ASTM procedures. Saudi Pultrusion Industries shoud be consulted for recommended design details. The actual geometry and application of the structural shapes will determine its ultimate suitability.

MECHANICAL PROPERTIES	ASTM TEST	UNITS	ISOPH-THALIC	VINYL ESTER
Tensile Stress, LW	D638	MPa	210	210
Tensile Stress, CW	D638	MPa	47	47
Tensile Modulus, LW	D638	GPa	17.5	18
Tensile Modulus, CW	D638	GPa	5.5	5.5
Flexural Stress, LW	D790	MPa	210	210
Flexural Stress, CW	D790	MPa	67	67
Flexural Modulus, LW	D790	GPa	12.5	12.5
Flexural Modulus, CW	D790	GPa	5.5	5.5
Compressive Stress, LW	D695	MPa	200	200
Compressive Stress, CW	D695	MPa	100	105
Compressive Modulus, LW	D695	GPa	17	18
Compressive Modulus, CW	D695	GPa	6.5	6.5
Shear Modulus, LW	-	GPa	3	3
Short Beam Shear, LW	D2344	MPa	31	31
Parallel Compressive Shear Stress, LW	D3846	MPa	20	20
Modulus of Elasticity, E	Full Section	GPa	18	19

MECHANICAL PROPERTIES	ASTM TEST	UNITS	ISOPH-THALIC	VINYL ESTER
Modulus of Elasticity and I-shape > 100mm	Full Section	GPa	17	17
Bearing Stress, LW	D953	MPa	200	200
Poison's Ratio, LW	D3039	cm/cm	0.33	0.33
Notched Izod Impact, LW	D256	ft-lbs/in	25	25
Notched Izod Impact, CW	D256	ft-lbs/in	4	4
PHYSICAL				
Coefficient of Thermal Expansion, LW	-	10^{-6} cm/cm °C	8	8
24hr Water Absorption	D570	% max. by wt.	0.6	0.6
Specific Gravity	D792	gm/gm	1.7~1.9	1.7~1.9
Barcol Hardness	D2583	-	45	45
ELECTRICAL				
Dielectric Strength, LW	D149	KV/in	35	35
Dielectric Strength, PF	D149	Volt/mil	200	200
Dielectric Constant, PF	D150	@60Hz	5.6	5.2
Arc Resistance, LW	D495	Seconds	120	120

LW - Lengthwise CW - Crosswise PF - Perpendicular to laminate face

PROPERTY FLAMMABILITY (For Fire Retardant Polyester and Vinyl Ester Profiles)	TEST	VALUE
Underwriters Laboratory	UL94	VO
Flammability	ASTM D635	Self Exting
Tunnel Test	ASTM E-84	25 Max.
NBS Smoke Chamber	ASTM E662	650~700(typ)

NOTES:

1- **The modulus of elasticity for full section bending is used to** determine the allowable stress in beam and column design.

2- **The shear modulus reflects the fact that the profiles are anisoptropic** and it has been determined from test on full length profiles.

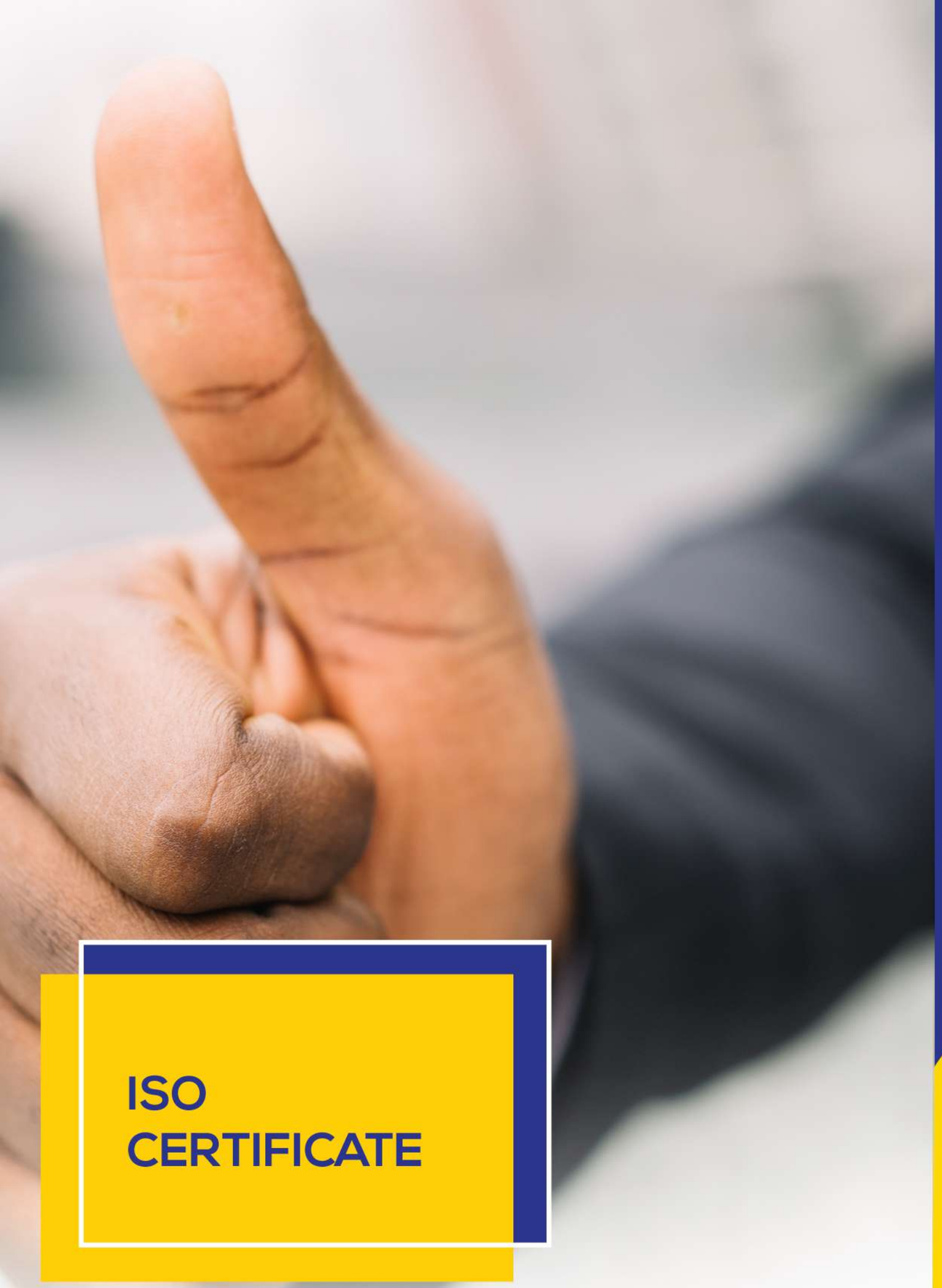
3- Barcol hardness of the laminate can be a reflection of the surfacing **tissues utilised. The value of 45 applies to the laminate made by SPI** with polyester surfacing tissues.

CHEMICAL RESISTANCE GUIDE

CHEMICAL ENVIRONMENT	ISOPHTHALIC		VINYL ESTER		CHEMICAL ENVIRONMENT	ISOPHTHALIC		VINYL ESTER	
	Max. Wt. %	Max. Oper. Temp. (°F/°C)	Max. Wt. %	Max. Oper. Temp. (°F/°C)		Max. Wt. %	Max. Oper. Temp. (°F/°C)	Max. Wt. %	Max. Oper. Temp. (°F/°C)
Acetic Acid	50	125/52	50	180/82	Lithium Chloride	SAT	150/66	SAT	210/99
Aluminum Hydroxide	100	160/71	100	180/82	Magnesium Chloride	ALL	170/77	ALL	210/99
Ammonium Chloride	ALL	170/77	ALL	210/99	Magnesium Nitrate	ALL	140/60	ALL	210/99
Ammonium Hydroxide	28	N/R	28	100/38	Magnesium Sulfate	ALL	170/77	ALL	210/99
Ammonium Bicarbonate	15	125/52	50	160/70	Mercuric Chloride	100	150/66	100	210/99
Ammonium Sulfate	ALL	170/77	ALL	210/99	Mercurous Chloride	ALL	140/60	ALL	210/99
Benzene	N/R	N/R	N/R	N/R	Nickel Chloride	ALL	170/77	ALL	210/99
Benzoic Acid	SAT	150/66	SAT	210/99	Nickel Sulfate	ALL	170/77	ALL	210/99
Borax	SAT	170/77	SAT	210/99	Nitric Acid	20	70/21	20	120/49
Calcium Carbonate	ALL	170/77	ALL	180/82	Oxalic Acid	ALL	75/24	ALL	210/99
Calcium Nitrate	ALL	180/82	ALL	210/99	Perchloric Acid	N/R	N/R	30	100/38
Carbon Tetrachloride	N/R	N/R	100	150/65	Phosporic Acid	100	120/49	100	210/99
Chlorine, Dry Gas	-	140/60	-	210/99	Potassium Chloride	ALL	170/77	ALL	210/99
Chlorine Water	SAT	80/27	SAT	200/93	Potassium Dichromate	ALL	170/77	ALL	210/99
Chromic Acid	5	70/21	10	150/65	Potassium Nitrate	ALL	170/77	ALL	210/99
Citric Acid	ALL	170/77	ALL	210/99	Potassium Sulfate	ALL	170/77	ALL	210/99
Copper Chloride	ALL	170/77	ALL	210/99	Propylene Glycol	ALL	170/77	ALL	210/99
Copper Cyanide	ALL	170/77	ALL	210/99	Sodium Acetate	ALL	160/71	ALL	210/99
Copper Nitrate	ALL	170/77	ALL	210/99	Sodium Bisulfate	ALL	170/77	ALL	210/99
Ethanol	50	75/24	50	100/38	Sodium Bromide	ALL	170/77	ALL	210/99
Ethylene Glycol	100	90/32	100	200/93	Sodium Cyanide	ALL	170/77	ALL	210/99
Ferric Chloride	ALL	170/77	ALL	210/99	Sodium Hydroxide	N/R	N/R	25	180/82
Ferrous Chloride	ALL	170/77	ALL	210/99	Sodium Nitrate	ALL	170/77	ALL	210/99
Formaldehyde	50	75/24	ALL	150/65	Sodium Sulfate	ALL	170/77	ALL	210/99
Gasoline	100	80/27	100	180/82	Stannic Chloride	ALL	160/71	ALL	210/99
Glucose	100	170/77	100	210/99	Sulfuric Acid	25	75/24	75	100/38
Glycerine	100	150/66	100	210/99	Tartaric Acid	ALL	170/77	ALL	210/99
Hydrobomic	50	120/49	50	150/65	Vinegar	100	170/77	100	210/99
Hydrochloric Acid	37	75/24	37	150/65	Water, Distilled	100	170/77	100	180/82
Hydrogen Peroxide	5	100/38	30	150/65	Zinc Nitrate	ALL	170/77	ALL	210/99
Lactic Acid	ALL	170/77	ALL	210/99	Zinc Sulfate	ALL	170/77	ALL	210/99

ALL - All Concentrations SAT - Saturated Solution N/R - Not Recommended (No Information Available)

The corrosion resistance data listed above is for general information only. Resin manufacturers have provided test data which indicates that the specific resin can withstand the corrosion condition listed above. Saudi Pultrusion Industries believes tha data to be true and accurate but no guarantee is expressed or implied as to specific performance. Testing for specific environments recommended.



ISO CERTIFICATE

ACM

UKAS MANAGEMENT SYSTEMS 245

Certificate of Registration

This is to certify that the
Quality Management System
of

Saudi Pultrusion Industry

P.O Box 24024, Al Khobar 31982 – Kingdom of Saudi Arabia

Has been independently assessed and is
compliant with the requirements of:

ISO 9001: 2015

For the following scope of activities:

Design, Fabrication, Assembly and installation of Pultruded Profiles, Grating, Platforms, Handrail, Ladders, Safety Cage, Fence, Cable Trays System, Cooling Towers, Components & Strength Membrane of Fiber Optics.

Certificate Number: 1710588Q

Date of initial registration	13th March 2017
Date of this certificate	03rd April 2018
Certificate Validity (subject to the company maintaining its system to the required standard. (Recertification is due 12th March 2020)	12th March 2019

Authorised Signatory

ACM LIMITED

This certificate is the property of ACM Limited and shall be returned immediately on request.
ACM Limited, Unit 5 Merus Court, Meridian Business Park, Leicester, LE19 1RJ
+44 (0) 845 504 6262 info@acmcert.com

TEST CERTIFICATES

AL-HOTY TECHNICAL SERVICES
A Division of Al-Hoty Establishment
C. R. 2051001626 / 005
P. O. Box 31729, Al-Khobar 31952
Kingdom of Saudi Arabia
Tel. : (03) 8644150 / 8948020 / 8945452
Fax : (03) 8943980
E-Mail : atsmain@al-hoty.com
Website : www.al-hoty.com

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قسم من مؤسسة الحوطي
ص.ب ٣١٧٢٩ - الخبر ٣١٩٥٢
المملكة العربية السعودية
atsmain@al-hoty.com : البريد الإلكتروني
www.al-hoty.com : موقع الشبكة

اعتماد الهيئة العربية السعودية للمواصفات والمقاييس
SAUDI ARABIAN STANDARDS ORGANIZATION ACCREDITED

TEST CERTIFICATE

Certificate No. AI-99091 Page No. 1 of 1

Customer : Saudi Pultrusion Industry
P. O. Box 2531 AL Khobar 31952, K.S.A.
Tel No. (03) 858-0404
Fax No. (03) 858-0202

Certifies that the below listed equipment has been tested using a series of standard equipment.

Item Submitted

Description : **Pultruded Grating**
Manufacturer : Saudi Pultrusion Ind.
Type / Model : 1 m x 1 m x 38 mm (Grating Only)
Serial Number : 1st Sample
Calibration Date : 17 December 2008

Test Description	Applied Load	Deflection	Comment Passed / Failed
Uniform Load Test	400 kg	0.855 mm	Passed (Withstand the Load)
	600 kg	0.934 mm	

Reference Standard Used

Description	ATS ID No.	Cal. Due Date	Certificate No.	Traceability
1000 kg @ 20 kg Test Weight	ATS-166	04 May 2009	98009	NIST
Digital Comparator	ATS-098	10 June 2009	98891	NPL

Tested By: _____ Calibration Tech. (Stamp)

Reviewed By: _____ H. A. Sanford QA/QC Officer

Approved By: _____ A. S. Arevalo General Manager

ATS-Cert17-Rev. No. 01

Regional Offices
Riyadh : P. O. Box 7359 - Tel. : 01 4784292
Jeddah : P. O. Box 8129 - Tel. : 02 6655865

المكاتب الرئيسية
الرياض : ص.ب ٧٣٥٩ - هاتف : ٤٧٨٤٢٩٢ (٠١)
جدة : ص.ب ٨١٢٩ - هاتف : ٦٦٥٥٨٦٥ (٠٢)

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قسم من مؤسسة الحوطي
atsmain@al-hoty.com : البريد الإلكتروني
www.al-hoty.com : موقع الشبكة

اعتماد الهيئة العربية السعودية للمواصفات والمقاييس
SAUDI ARABIAN STANDARDS ORGANIZATION ACCREDITED

TEST CERTIFICATE

Certificate No. AI-99090 Page No. 1 of 1

Customer : Saudi Pultrusion Industry
P. O. Box 2531 AL Khobar 31952, K.S.A.
Tel No. (03) 858-0404
Fax No. (03) 858-0202

Certifies that the below listed equipment has been tested using a series of standard equipment.

Item Submitted

Description : **Pultruded Grating**
Manufacturer : Saudi Pultrusion Ind.
Type / Model : 1 m x 1 m x 38 mm (checker plate bonded)
Serial Number : 2nd Sample
Calibration Date : 17 December 2008

Test Description	Applied Load	Deflection	Comment Passed / Failed
Uniform Load Test	400 kg	1.623 mm	Passed (Withstand the Load)
	600 kg	1.812 mm	

Reference Standard Used

Description	ATS ID No.	Cal. Due Date	Certificate No.	Traceability
1000 kg @ 20 kg Test Weight	ATS-166	04 May 2009	98009	NIST
Digital Comparator	ATS-098	10 June 2009	98891	NPL

Tested By: _____ Calibration Tech. (Stamp)

Reviewed By: _____ H. A. Sanford QA/QC Officer

Approved By: _____ A. S. Arevalo General Manager

ATS-Cert17-Rev. No. 01

Regional Offices
Riyadh : P. O. Box 7359 - Tel. : 01 4784292
Jeddah : P. O. Box 8129 - Tel. : 02 6655865

المكاتب الرئيسية

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قسم من مؤسسة الحوطي

اعتماد الهيئة العربية السعودية للمواصفات والمقاييس
SAUDI ARABIAN STANDARDS ORGANIZATION ACCREDITED

TEST CERTIFICATE

Certificate No. AI-87804 Page No. 1 of 1

Customer : Saudi Pultrusion Industries
P. O. Box 2531 Al Khobar 31952, Saudi Arabia
Tel No. 858-0404

Item Submitted

Description : **1 No. Assembled FRP Handrail System 1400 mm Wide by 1100 mm High**
Tube Dimension: 50 mm Diameter & 3.2 mm Thickness

Test Method : Base on test procedure and drawings provided by SPI

Date Tested : 01 November 2007

Certifies that the above listed material has been tested using a series of calibrated test equipment.

Test Results

Test Description	Applied Load	Duration	Deflection	Remarks
Vertical Load Test	75 kgs 100 kgs	Held for 60 secs Held for 60 secs	2.94 mm 3.88 mm	No visible defects were observed

Permanent bend / deformation after 100 kgs load removed : 0.05 mm

Overall Conlusion: The test sample was inspected after the test and no visible defects were observed. The permanent deformation caused by the application of test load is negligible only.

Test Equipment Used

Description	ATS ID No.	Calibration Due Date	Certificate No.
Test Weights	ATS-166	04 November 2007	82470
Deflection Meter / Digital Comparator	ATS-098	10 December 2007	83430

Tested By: A. P Ayat Jr.
Test/Calibration Engineer

Reviewed By: M. S. David
Operations Manager

Approved By: A. S. Arevalo
General Manager

ATS-TC

Regional Offices
Riyadh : P. O. Box 7359 - Tel. : 01 4784292
Jeddah : P. O. Box 8129 - Tel. : 02 6655866

المكاتب الإقليمية

AL-HOTY TECHNICAL SERVICES
A Division of Al-Hoty Establishment
C. R. 2051001626 / 005
P. O. Box 31729, Al-Khobar 31952
Kingdom of Saudi Arabia
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قسم من مؤسسة الحوطي

اعتماد الهيئة العربية السعودية للمواصفات والمقاييس
SAUDI ARABIAN STANDARDS ORGANIZATION ACCREDITED

TEST CERTIFICATE

Certificate No. AI-89277 Page No. 1 of 1

Customer : Saudi Pultrusion Industries
P. O. Box 2531 Al Khobar 31952, Saudi Arabia
Tel No. 858-0404

Item Submitted

Description : **1 No. Assembled FRP Handrail System 1100mm high, 2000mm long, vertical post at every 1000 mm. Materials comprising 50x32mm round tube bolted assemply using 3-way/4-way connector, with bottom base plate and 100mm kickrail; fixed using stainless steel fasteners anchor bolts.**

Test Method : Base on test procedure provided by SPI

Date Tested : 10 January 2008

Certifies that the above listed material has been tested using a series of calibrated test equipment.

Test Results

Test Description	Applied Load	Duration	Deflection	Remarks
Horizontal Pull Load Test	80 kgs 102 kgs	5 min 5 min	61.53 mm 84.95 mm	No visible defects were observed

Permanent bend / deformation after 100 kgs load removed : 0.0 mm

Overall Conclusion: The test sample was inspected after the test and no visible defects were observed. There was no permanent deformation observed.

Test Equipment Used

Description	ATS ID No.	Calibration Due Date	Certificate No.
Tensile Load Cell	ATS-221	16 August 2008	85856
Digital Caliper	ATS-163	02 January 2009	88912

Tested By: M. S. David
Operations Manager

Reviewed By: H. A. Sanford
QA/QC Officer

Approved By: A. S. Arevalo
General Manager

ATS-TC

Regional Offices
Riyadh : P. O. Box 7359 - Tel. : 01 4784292
Jeddah : P. O. Box 8129 - Tel. : 02 6655866

المكاتب الإقليمية

AL HOTY- STANGER	SAUDI PULTRUSION INDUSTRY	M 2K6199
	FIBERGLASS REINFORCED PLASTIC PROFILE	PAGE 1 OF 5
	TENSILE TEST RESULT	25 MARCH 2006

MATERIAL SPECIFICATION		:	ROUND POST (50x3mmt.)
SAMPLE NO.		:	1
MACHINED WIDTH	(mm)	:	13.23
THICKNESS	(mm)	:	2.88
CROSS-SECTIONAL AREA	(mm^2)	:	38.102
TENSILE LOAD	(kN)	:	13.5
TENSILE STRENGTH	(MPa)	:	354

NILO V. YPIL
Manager
Metallurgical & NDT/Inspection
For Al Hoty-Stanger Ltd. Co.

Tested by: Rafael B. Espiritu Jr.

Verified by: Luis D. Hermogenes

This report relates only to the sample tested and shall only be reproduced in full with the written approval of AHS testing laboratory.

AL HOTY- STANGER	SAUDI PULTRUSION INDUSTRY	M 2K6199
	FIBERGLASS REINFORCED PLASTIC PROFILE	PAGE 2 OF 5
	TENSILE TEST RESULT	25 MARCH 2006

SAMPLE IDENTIFICATION		:	OVAL SHAPE
SAMPLE NO.		:	2
MACHINED WIDTH	(mm)	:	12.59
THICKNESS	(mm)	:	3.17
CROSS-SECTIONAL AREA	(mm^2)	:	39.91
TENSILE LOAD	(kN)	:	15.7
TENSILE STRENGTH	(MPa)	:	393

NILO V. YPIL
Manager
Metallurgical & NDT/Inspection
For Al Hoty-Stanger Ltd. Co.

Tested by: Rafael B. Espiritu Jr.

Verified by: Luis D. Hermogenes

This report relates only to the sample tested and shall only be reproduced in full with the written approval of AHS testing laboratory.

AL HOTY- STANGER	SAUDI PULTRUSION INDUSTRY	M 2K6199
	FIBERGLASS REINFORCED PLASTIC PROFILE	PAGE 3 OF 5
	TENSILE TEST RESULT	25 MARCH 2006

SAMPLE IDENTIFICATION	:	GRATING LOAD BAR (3.8mmt.)
SAMPLE NO.	:	3
MACHINED WIDTH	(mm):	12.82
THICKNESS	(mm):	3.57
CROSS-SECTIONAL AREA	(mm^2):	45.77
TENSILE LOAD	(kN):	30
TENSILE STRENGTH	(MPa):	655

NILO V. YPIL
Manager
Metallurgical & NDT/Inspection
For Al Hoty-Stanger Ltd. Co.

Tested by: Rafael B. Espiritu Jr.

Verified by: Luis D. Hermogenes

This report relates only to the sample tested and shall only be reproduced in full with the written approval of AHS testing laboratory.

AL HOTY- STANGER	SAUDI PULTRUSION INDUSTRY	M 2K6199
	FIBERGLASS REINFORCED PLASTIC PROFILE	PAGE 4 OF 5
	TENSILE TEST RESULT	25 MARCH 2006

SAMPLE IDENTIFICATION	:	SQUARE TUBE (45x6mmt.)
SAMPLE NO.	:	4
MACHINED WIDTH	(mm):	13.32
THICKNESS	(mm):	5.86
CROSS-SECTIONAL AREA	(mm^2):	78.06
TENSILE LOAD	(kN):	29.3
TENSILE STRENGTH	(MPa):	375

NILO V. YPIL
Manager
Metallurgical & NDT/Inspection
For Al Hoty-Stanger Ltd. Co.

Tested by: Rafael B. Espiritu Jr.

Verified by: Luis D. Hermogenes

This report relates only to the sample tested and shall only be reproduced in full with the written approval of AHS testing laboratory.

AL HOTY- STANGER	SAUDI PULTRUSION INDUSTRY	M 2K6199
	FIBERGLASS REINFORCED PLASTIC PROFILE	PAGE 5 OF 5
	TENSILE TEST RESULT	25 MARCH 2006

MATERIAL SPECIFICATION	:	SQUARE TUBE (45x3mmt.)
SAMPLE NO.	:	5
MACHINED WIDTH	(mm) :	13.04
THICKNESS	(mm) :	2.89
CROSS-SECTIONAL AREA	(mm^2) :	37.69
TENSILE LOAD	(kN) :	15.1
TENSILE STRENGTH	(MPa) :	401

NILO V. YPIL
Manager
Metallurgical & NDT/Inspection
For Al Hoty-Stanger Ltd. Co.

Tested by: **Rafael B. Espiritu Jr.**

Verified by: **Luis D. Hermogenes**

This report relates only to the sample tested and shall only be reproduced in full with the written approval of AHS testing laboratory.

AL HOTY- STANGER	SAUDI PULTRUSION INDUSTRY	M 2K6032
	FIBERGLASS REINFORCED PLASTIC PROFILE	PAGE 1 OF 3
	TENSILE TEST RESULTS	17 JAN. 2006

MATERIAL SPECIFICATION	:	U - CHANNEL (76mm. WIDE)
SAMPLE NO.	:	1
MACHINED WIDTH	(mm) :	25.19
THICKNESS	(mm) :	3.43
CROSS-SECTIONAL AREA	(mm^2) :	86.4
TENSILE LOAD	(kN) :	37.9
TENSILE STRENGTH	(MPa) :	439

NILO V. YPIL
Manager
Metallurgical & NDT/Inspection
For Al Hoty-Stanger Ltd. Co.

Tested by: **Leo C. Francia I**

Verified by: **Luis D. Hermogenes**

This report relates only to the sample tested and shall only be reproduced in full with the written approval of AHS testing laboratory.

AL HOTY- STANGER	SAUDI PULTRUSION INDUSTRY	M 2K6032
	FIBERGLASS REINFORCED PLASTIC PROFILE	PAGE 3 OF 3
	TENSILE TEST RESULT	18 JAN. 2006

SAMPLE IDENTIFICATION	:	W - CHANNEL (83mm. WIDE)
SAMPLE NO.	:	3
MACHINED WIDTH	(mm) :	25.06
THICKNESS	(mm) :	2.91
CROSS-SECTIONAL AREA	(mm^2) :	72.92
TENSILE LOAD	(kN) :	34.1
TENSILE STRENGTH	(MPa) :	468

AL HOTY-STANGER LTD. CO. — Independent Laboratories & Inspection Testing

NILO V. YPIL
Manager
Metallurgical & NDT/Inspection
For Al Hoty-Stanger Ltd. Co.

Tested by: Leo C. Francia I

Verified by: Luis D. Hermogenes

This report relates only to the sample tested and shall only be reproduced in full with the written approval of AHS testing laboratory.

شركة السحيمي . فيغرو المحدودة
FUGRO-SUHAIMI LTD.
geotechnical, materials and NDT engineers
P.O. Box 2165
Dammam 31451
Saudi Arabia
Phone : 03 857 4200
Fax : 03 857 2035
C.R. 2050004110
E-Mail : info@fugro-suhaimi.com
Website : www.fugro-suhaimi.com

FUGRO - SUHAIMI
السحيمي . فيغرو
ص.ب ٢١٦٥
الدمام ٣١٤٥١
المملكة العربية السعودية
تلفون : ٠٣٨٥٧٤٢٠٠
فاكس : ٠٣٨٥٧٢٠٣٥
س . ت : ٢٠٥٠٠٠٤١١٠
البريد الكتروني : info@fugro-suhaimi.com
موقع الانترنت : www.fugro-suhaimi.com

Ref. JEDF-396/11

Report No. SA11-5090
Date: 06 December 2011

Saudi Pultrusion Industry (SPI)
Jeddah, Saudi Arabia

Attention: Engr. Haytham Saad El Din,
Area Sales Manager

Report on Ladder Tests
Fiberglass Reinforced Composite Materials (FRP) Ladder
NWC Project, Main Lines of Waste Water in North of Jeddah
Jeddah, Saudi Arabia

Gentlemen:

Fugro-Suhaimi Ltd. (FSL) is pleased to present this report on the tests performed on FRP Ladder at your above project site. The tests were conducted in general accordance with our proposal ref. no. JEDF-375/11 dated 20 November 2011. You authorized the tests through your Purchase Order No. 011-11-0317 dated 21 November 2011. This report presents the results of the following four (4) tests on FRP Ladder carried out by FSL on 27 November 2011.

1. Rung Torque Test
2. Rung Strength Test
3. Rung Shear Strength Test
4. Ladder Fastening Test

The FRP ladder tested comprises of 45x45x6.35 mm square tube as side railings/stiles having 450mm clear inside opening, and 32-mm serrated rungs fixed as steps with a clear distance of 300 mm between each step. The safety cage comprises of 40x6 mm pultruded vertical strips and 70x25x8 mm top, intermediate, and bottom hoops. The whole set is fastened using SS316 bolts, nuts and double washers. This ladder is completely installed in the shaft through 150x76x8mm, 170mm long wall brackets and fixed using SS316 Anchor Bolts.

The following paragraphs present a description of the four tests conducted including objectives of the tests, apparatus used, procedure, and test results.

Rung Torque Test

Objective. To determine the ability of a joint between FRP ladder rung and stiles to withstand specified torque. The test was performed on a complete FRP ladder installed and fixed on the wall with more than three rungs.

Apparatus

a. Clamping adaptor
b. calibrated Standard weights
c. Timer

Procedure

a. Placing and securing the ladder vertically where bottom lay flat, stable, and without swaying during test.
b. Attaching the clamping adaptor in the middle of the topmost rung of the ladder. See Attachment 1.
c. Applying 100 N.m force on the adaptor fixed to the rung and then starting the timer. Maintaining the load for 15 seconds and observing for any movement and inspecting the joints between the rung and the stiles. Then releasing the load after 15 seconds.
d. Repeating step c nine more times.
e. After 10 trials of load application and releasing, inspecting the condition of the dowel connection by looking down the stile tube and observing the points of connection to the stile.

Results

a. No looseness or twisting of rung in stile observed.
b. No signs of damage or looseness of the dowel fixings observed.
c. No observation of movement of rung during the test.

Rung Strength Test

Objective. To determine the resistance to structural damage of ladder rungs under static loading. The test was performed on a complete FRP ladder installed and fixed on the wall with more than three rungs.

Apparatus

a. Hydraulic loading jack and gauge capable of applying a constant test load of 4 kN (~400 Kg).
b. Top fixed reaction beam
c. Flat plates, 100mm, 75mm and 50mm long that can carry the loading apparatus and securely seat on the ladder rung.
d. Timer

Procedure

a. Placing and securing ladder vertically where bottom lay flat and stable, without swaying during the test;
b. Fixing a reaction beam above the ladder with a clear distance of 230mm;
c. Placing the flat plates on the top of rung, midway between the stiles. The largest plate being at the bottom and the smallest on top;
d. Placing the hydraulic loading jack on the plates between the rung and the beam. (see Attachment 2);
e. Applying load until reaching 4 kN (~400 Kg) load and holding for 90 seconds;
f. Releasing the force after 90 seconds; and
g. Inspecting the ladders for signs of structural damage, e.g. splitting, delamination, damage at the point of entry of rung into stile.
h. Checking for looseness or twisting in the style.

Results

a. No looseness or twisting of rung in stile observed.
b. No signs of damage or looseness of the dowel fixings observed.

Rung Shear Strength Test

Objective. To determine the resistance to structural damage of FRP ladder rungs under a rung to stile shear loading. The test was performed on a complete FRP ladder installed and fixed on the wall with more than three rungs.

Apparatus

a. Hydraulic loading jack and gauge capable of applying a constant test load of 4.8 kN (~480 Kg).
b. Top fixed reaction beam
c. Flat plates, 100mm, 75mm and 50mm long that can carry the loading apparatus and securely seat on the ladder rung.
d. Timer

Procedure

a. Placing and securing ladder vertically where bottom lay flat and stable, without swaying during the test.
b. Fixing a reaction beam above the ladder with a clear distance of 230mm
c. Placing the flat plates on the top of rung, midway between the stiles. The largest plate being at the bottom and the smallest on top;
d. Placing the hydraulic loading jack on the plates between the rung and the beam. (see Attachment 2);
e. Applying 4.8 kN (~480 Kg) load on the topmost rung and holding for 90 seconds.
e. Releasing the load after 90 seconds.
f. Inspecting the ladder rung for signs of structural damage, e.g. splitting, delamination, damage at the point of entry of rung into stile.
g. Checking for looseness or twisting in the stile.

Results

a. No looseness or twisting of rung in stile observed.
b. No signs of damage or looseness of the dowel fixings observed.

Ladder Fastening Test

Test Objective. To determine the resistance to structural damage to the bracket mounting support of the FRP ladder. The test was performed on a complete FRP ladder installed and fixed on the wall with more than three rungs

Apparatus

a. Hydraulic loading jack and gauge capable of applying a constant test load of 4kN (~400 Kg).
b. Top fixed reaction beam
c. Flat plates, 100mm, 75mm and 50mm long that can carry the loading apparatus and securely seat on the ladder rung.
d. Timer

Procedure

a. Mounting the ladder on the brackets and secure/fix the brackets to the mounting surface.
b. Fixing a reaction beam above the ladder with a clear distance of 230mm
c. Placing the flat plates on the top of rung, midway between the stiles. The largest plate being at the bottom and the smallest on top;
d. Placing the hydraulic loading jack on the plates between the rung and the beam. (see Attachment 3);
e. Applying load until it reaches 4kN (~400 Kg) and holding it for 90 seconds.
f. Releasing the load after 90 seconds;
g. Inspecting for any damage to the ladder at its mounting on the brackets.
h. Checking the ladder for looseness in its mounting on the brackets.
i. Removing the bracket mounting of the ladder and inspecting the ladder for damage at the points of mounting.

Results

a. No looseness of ladder in the mounting observed.
b. No signs of structural damage observed.

Conclusion

FSL conducted tests on a FRP ladder on 27 November 2011. The ladder was tested for torque, strength, shear, and fastening. All the tests indicated satisfactory performance of the ladder, based on the criteria set forth by Saudi Pultrusion Industry (SPI).

We appreciate being of service to you on this project. Please do not hesitate to contact us if you have any questions.

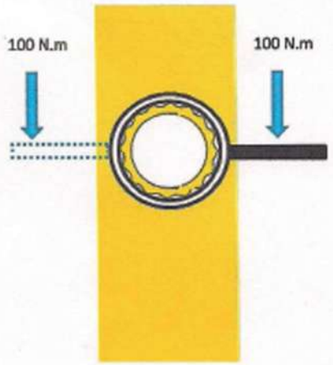
Regards,

FUGRO-SUHAIMI LTD.

Muhammad Farooq
Senior Laboratory Supervisor

Material Division
Western Prov. Lab. 20

ATTACHMENT 1 **Rung Torque Test**



Left: Side view sketch of clamping adaptor attached to FRP Ladder rung.

Below: Photo of the test as the load applied to the clamping adaptor

Material Division
Western Prov. Lab. 20

Report No. : SA11-5090
Client : Saudi Pultrusion Industry
Date : 06 December 2011

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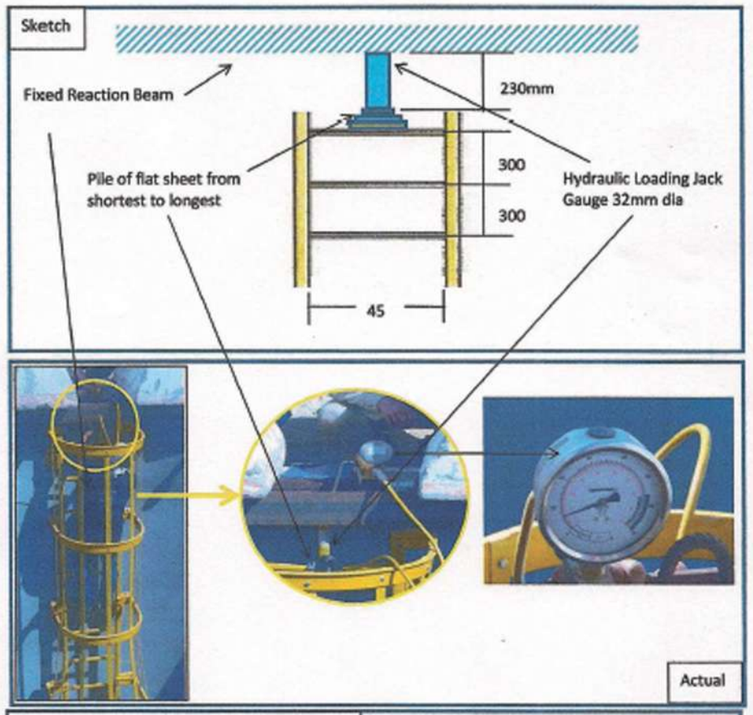
ATTACHMENT - 2

Rung Strength and Rung Shear Strength Tests



Checkpoints:	
1. Looseness or twisting of rung in stile. 2. Any signs of damage or looseness of the dowel fixing	

Report No. : SA11-5090
Client : Saudi Pultrusion Industry
Date : 06 December 2011

FUGRO – SUHAIMI
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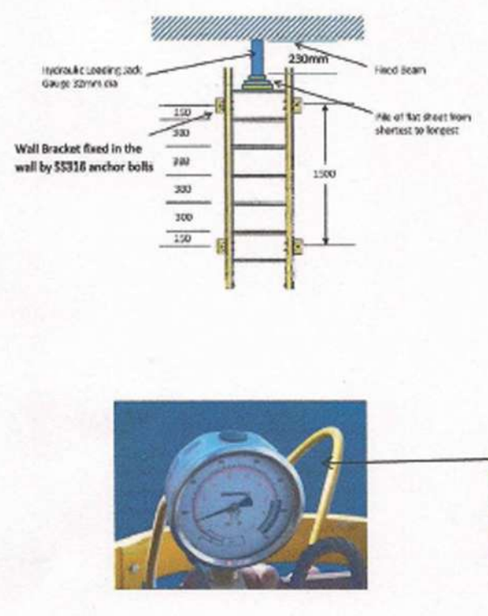
ATTACHMENT 3 **Ladder Fastening Test**



Checkpoints:	
1. Looseness of ladder in the mounting. 2. Any signs of structural damage	

LETTER OF TRANSMITTAL

FUGRO-SUHAIMI السحيمي-فيغرو

To	Saudi Pultrusion Industry (SPI)		
Attention	Engr. Haytham Saad El Din, Area Sales Manager		
Reference	Test Reports		
Project:	NWC Project, Main lines of waste water in North of Jeddah	**Report Date**	06 December 2011
		Job No.	SA11-5090

Attached hereto are report as follows:

Copies	Test Date	Description	No of Report
1	27 November 2011	Quality Test on Ladder Rung Torque Test	1
1	27 November 2011	Quality Test on Ladder Rung Strength Test	1
1	27 November 2011	Quality Test on Ladder Rung Shear Strength Test	1
1	27 November 2011	Quality Test on Ladder Leader Fastening Test	1

FUGRO-SUHAIMI LTD.

Muhammad Farooq
Senior Laboratory Supervisor

RUNG TORQUE TEST REPORT

FUGRO-SUHAIMI السحيمي-فيغرو

Client	Saudi Pultrusion Industry (SPI)	**Job No.**	SA11-5090
Project	NWC Project, Main lines of waste water in North of Jeddah	**Report Date**	6 December 2011
Consultant	AAW & Partners	**Test Date**	27 November 2011
Contractor	Al Harbi Trad. & Cont. Co. Ltd.	**Supplier**	Saudi Pultrusion Industry (SPI)
Location	Jeddah	**Material**	Ladder
Reference standards	ANSI-ASC A 14.3 & OSHA-29CFR-1910.27	**Test Method**	SPI Test Procedure attached

A force of 340 N (34 kg) applied on the end of adaptor with 30 cm arm length which was clamped in the middle of top most rung of ladder using FSL calibrated standard weights. The applied force was recorded and held for 15 seconds. After 15 seconds, released the force and same 10 trials were completed. Inspected the condition of the dowel connection by looking down stile tube and points of connection to the stile.

Torque Applied (Held for 15 Second and repeated 10 times) N.m	Observations after Test Load Released	Yes / No
100 N.m (34 kg at the end of 30 cm adaptor arm length)	1. Looseness or twisting of rung in stile	No
	2. Any signs of structural damage or looseness of the dowel fixings	No
	3. Observation of the movement of rung during the test	No
	4. Photos / sketches of the test	Yes

Specification	Specified Torque : 100 N.m

Remarks	1	The specification and test procedure was provided by Saudi Pultrusion Industry (SPI) and the test was performed in accordance with SPI procedure, copy attached.
	2	Test witnessed by representatives of Saudi Pultrusion Industry (SPI) and Al Harbi Trad. & Cont. Co. Ltd.
	3	Ladder rung was subjected under 100 N.m twisting torque and held for 15 second during 10 repeated trials. The ladder rung tested for torque indicated satisfactory performance, based on the criteria set forth by SPI.

Tested by (FSL) : M. Afaq

FUGRO-SUHAIMI Material Division Western Prov. Lab.

FUGRO-SUHAIMI LTD.

RUNG STRENGTH TEST REPORT

FUGRO-SUHAIMI
السحيمي - فيغرو

Client	Saudi Pultrusion Industry (SPI)	**Job No.**	SA11-5090
Project	NWC Project, Main lines of waste water in North of Jeddah	**Report Date**	6 December 2011
Consultant	AAW & Partners	**Test Date**	27 November 2011
Contactor	Al Harbi Trad. & Cont. Co. Ltd.	**Supplier**	Saudi Pultrusion Industry (SPI)
Location	Jeddah	**Material**	Ladder Rungs
Reference standards	ANSI-ASC A 14.3 & OSHA-29CFR-1910.27	**Test Method**	SPI Test Procedure attached

The static load applied on ladder rung against reaction load by using FSL calibrated hydraulic loading jack. The applied load was read and recorded from dial gauge of hydraulic loading jack which was mounted on the ladder rung being tested.

Test Load Applied (Held for 90 Second) kN (kg)	Observations after released Test Load	Yes / No
4.0 kN (400 kg)	1. Looseness or twisting of rung in stile	No
	2. Any signs of damage or looseness of the dowel fixings	No
	3. Photos / sketches of the test attached	Yes

Specification	Specified Load : 3.75 kN (375 kg)

Remarks	1	The specification and test procedure was provided by Saudi Pultrusion Industry (SPI) and the test was performed in accordance with SPI procedure, copy attached.
	2	Test witnessed by representatives of Saudi Pultrusion Industry (SPI) and Al Harbi Trad. & Cont. Co. Ltd
	3	Ladder rung was subjected under 400 Kg static load and held for 90 second. The rung tested for strength indicated satisfactory performance, based on the criteria set forth by SPI.

Tested by (FSL) : M. Afaq

FUGRO-SUHAIMI Material Division Western Prov. Lab. 20

FUGRO-SUHAIMI LTD.

Disk 20S:\Lab\Lab. 2011\Saudi Pultrusion Industry SPI 11-5090\GRP Rung Strength Test 27-11-11.doc

RUNG SHEAR STRENGTH TEST REPORT

FUGRO-SUHAIMI
السحيمي - فيغرو

Client	Saudi Pultrusion Industry (SPI)	**Job No.**	SA11-5090
Project	NWC Project, Main lines of waste water in North of Jeddah	**Report Date**	6 December 2011
Consultant	AAW & Partners	**Test Date**	27 November 2011
Contactor	Al Harbi Trad. & Cont. Co. Ltd.	**Supplier**	Saudi Pultrusion Industry (SPI)
Location	Jeddah	**Material**	Ladder Rungs
Reference standards	ANSI-ASC A 14.3 & OSHA-29CFR-1910.27	**Test Method**	SPI Test Procedure attached

The static load applied on ladder rung against reaction load by using FSL calibrated hydraulic loading jack. The applied load was read and recorded from dial gauge of hydraulic loading jack which was mounted on the ladder rung being tested.

Test Load Applied (Held for 90 Second) kN (kg)	Observations after Released of Test Load	Yes / No
4.80 kN (480 kg)	1. Looseness or twisting of rung in stile	No
	2. Any signs of damage or looseness of the dowel fixings	No
	3. Photos / sketches of the test attached	Yes

Specification	Specified Load : 4.80 kN (480 kg)

Remarks	1	The specification and test procedure was provided by Saudi Pultrusion Industry (SPI) and the test was performed in accordance with SPI procedure, copy attached.
	2	Test witnessed by representatives of Saudi Pultrusion Industry (SPI) and Al Harbi Trad. & Cont. Co. Ltd
	3	Ladder rung was subjected under 480 Kg static load and held for 90 second. The ladder rung tested for shear strength indicated satisfactory performance, based on the criteria set forth by SPI.

Tested by (FSL) : M. Afaq

FUGRO-SUHAIMI Material Division Western Prov. Lab. 20

FUGRO-SUHAIMI LTD.

Disk 20S:\Lab\Lab. 2011\Saudi Pultrusion Industry SPI 11-5090\GRP Rung Shear Strength Test-27-11-11.doc

LADDER FASTENING TEST REPORT

FUGRO-SUHAIMI
السحيمي-فيزرو

Client	Saudi Pultrusion Industry (SPI)	**Job No.**	SA11-5090
Project	NWC Project, Main lines of waste water in North of Jeddah	**Report Date**	6 December 2011
Consultant	AAW & Partners	**Test Date**	27 November 2011
Contactor	Al Harbi Trad. & Cont. Co. Ltd.	**Supplier**	Saudi Pultrusion Industry (SPI)
Location	Jeddah	**Material**	Ladder
Reference standards	ANSI-ASC A 14.3 & OSHA-29CFR-1910.27	**Test Method**	SPI Test Procedure attached

The static load applied on ladder rung against reaction load by using FSL calibrated hydraulic loading jack. The applied load was read and recorded from dial gauge of hydraulic loading jack which was mounted on the ladder rung being tested.

Test Load Applied (Hold for 90 Second) kN (kg)	Observations after Release of Test Load	Yes / No
4.00 kN (400 kg)	1. Looseness of ladder in the mounting	No
	2. Any signs of structural damage	No
	3. Photos / sketches of the test attached	Yes

Specification	Specified Load : 3.75 kN (375 kg)

Remarks	1	The specification and test procedure was provided by Saudi Pultrusion Industry (SPI) and the test was performed in accordance with SPI procedure, copy attached.
	2	Test witnessed by representatives of Saudi Pultrusion Industry (SPI) and Al Harbi Trad. & Cont. Co. Ltd
	3	Ladder was subjected under 400 Kg static load and held for 90 second. Base on above mentioned visual observations made after releasing load, Ldader GRP Rung comply with safety requirements of ANSI-ASC A 14.3. The ladder tested for fastening indicated satisfactory performance, based on the criteria set forth by SPI.

Tested by (FSL) : M. Afaq

FUGRO-SUHAIMI Material Division Western Prov. Lab. 20\

FUGRO-SUHAIMI LTD.

LETTER OF TRANSMITTAL

FUGRO-SUHAIMI
السحيمي-فيزرو

To	Saudi Pultrusion Industry (SPI)		
Attention	Engr. Haytham Saad El Din, Area Sales Manager		
Reference	Test Reports		
Project:	NWC Project, Main lines of waste water in North of Jeddah	**Report Date**	06 December 2011
		Job No.	SA11-5090

Attached hereto are report as follows:

Copies	Test Date	Description	No of Report
1	27 November 2011	Site Data Sheet for Ladder Quality Test	1

FUGRO-SUHAIMI LTD.

Muhammad Farooq
Senior Laboratory Supervisor

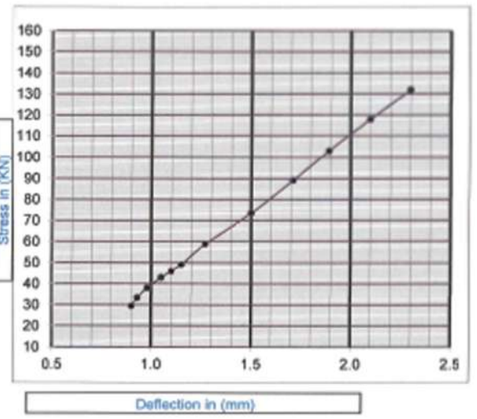
KING ABDULAZIZ INTERNATIONAL AIRPORT DEVELOPMENT PROJECT (PHASE I), JEDDAH - KSA

CONSULTANT	CONTRACTOR	INDEPENDENT TESTING LABORATORY

dar al-handasah shair and partners | مجموعة بن لادن السعودية SAUDI BINLADIN GROUP | AL JAZZAR الجـزار

Client	M/s Saudi Pultrusion Industries	Sampling date	NP
Location	NP	Casting Date	NP
Referance #	NP	Testing Date	13.08.2014
Sample Description	Fiber Glass Reinforced Plastic	Reporting Date	16.08.2014
Breadth (mm)	150mm		
Span Length (mm)	500mm		
Depth (mm)	100mm		

Deflection (mm)	Stress (KN)	Stress (Ton)
0.90	29.4	3.0
0.93	33.3	3.4
0.98	38.0	3.9
1.05	43.0	4.4
1.10	45.9	4.7
1.15	49.0	5.0
1.27	58.8	6.0
1.50	73.5	7.5
1.71	89.0	9.1
1.89	103.0	10.5
2.10	118.0	12.0
2.30	132.0	13.5
2.45	147.0	15.0



Remarks:
1. Test Carried out according to SPI Method
2. No Cracks appear up to 15 Ton load at 500mm Span Length.
3. Maximum deflection noted without any cracks 2.45mm.

For Omar Jazzar Consulting Engineers
(Geotechnical and Material Engineers)

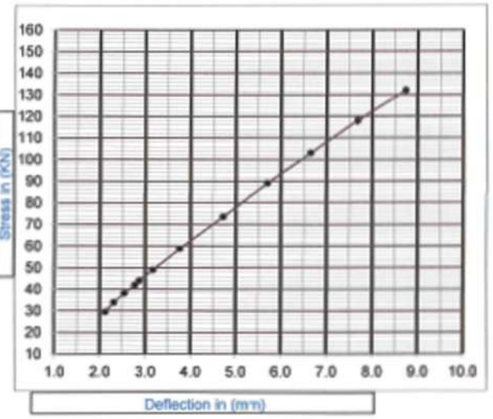
KING ABDULAZIZ INTERNATIONAL AIRPORT DEVELOPMENT PROJECT (PHASE I), JEDDAH - KSA

CONSULTANT	CONTRACTOR	INDEPENDENT TESTING LABORATORY

dar al-handasah shair and partners | مجموعة بن لادن السعودية SAUDI BINLADIN GROUP | AL JAZZAR الجـزار

Client	M/s Saudi Pultrusion Industries	Sampling date	NP
Location	NP	Casting Date	NP
Referance #	NP	Testing Date	13.08.2014
Sample Description	Fiber Glass Reinforced Plastic	Reporting Date	16.08.2014
Breadth (mm)	150mm		
Span Length (mm)	800mm		
Depth (mm)	100mm		

Deflection (mm)	Stress (KN)	Stress (Ton)
2.12	29.4	3.0
2.31	33.8	3.4
2.54	38.1	3.9
2.77	42.0	4.3
2.87	44.1	4.5
3.17	49.0	5.0
3.76	58.8	6.0
4.72	73.5	7.5
5.70	89.0	9.1
6.65	103.0	10.5
7.68	118.0	12.0
8.74	132.0	13.5
9.67	147.0	15.0



Remarks:
1. Test Carried out according to SPI Method
2. No Cracks appear up to 15 Ton load at 800mm Span Length.
3. Maximum deflection noted at 15 Ton Load is 9.57mm.

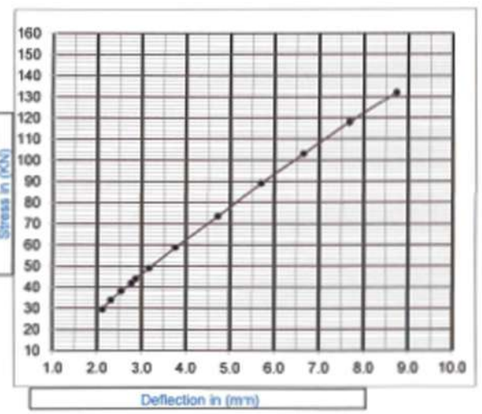
For Omar Jazzar Consulting Engineers
(Geotechnical and Material Engineers)

KING ABDULAZIZ INTERNATIONAL AIRPORT DEVELOPMENT PROJECT (PHASE I), JEDDAH - KSA

CONSULTANT	CONTRACTOR	INDEPENDENT TESTING LABORATORY
dar al-handasah shair and partners	مجموعة بن لادن السعودية SAUDI BINLADIN GROUP	AL JAZZAR الجزار

Client	M/s Saudi Pultrusion Industries	Sampling date	NP
Location	NP	Casting Date	NP
Referance #	NP	Testing Date	13.08.2014
Sample Description	Fiber Glass Reinforced Plastic	Reporting Date	16.08.2014
Breadth (mm)	150mm		
Span Length (mm)	800mm		
Depth (mm)	100mm		

Deflection (mm)	Stress (KN)	Stress (Ton)
2.12	29.4	3.0
2.31	33.8	3.4
2.54	38.1	3.9
2.77	42.0	4.3
2.87	44.1	4.5
3.17	49.0	5.0
3.76	58.8	6.0
4.72	73.5	7.5
5.70	89.0	9.1
6.65	103.0	10.5
7.68	118.0	12.0
8.74	132.0	13.5
9.67	147.0	15.0



Remarks:
1. Test Carried out according to SPI Method
2. No Cracks appear up to 15 Ton load at 800mm Span Length.
3. Maximum deflection noted at 15 Ton Load is 9.57mm.

For Omar Jazzar Consulting Engineers
(Geotechnical and Material Engineers)

AL-HOTY CALIBRATION SERVICES
A BRANCH OF AL-HOTY CO. LTD.

Calibration Laboratory
C. R. 2051015391
P.O. Box 31729, Al-Khobar 31952
Kingdom of Saudi Arabia
Tel. : (013) 864 4150 / 894 8020 / 894 5452,
Fax : (013) 898 1644 / 8943980
E-Mail : acs.kh@al-hoty.com
Website : www.alhotycalibration.com

اللجنة السعودية للاعتماد
Saudi Accreditation Committee
SACC

Calibration Cert #: 12N \ 1417

Test Certificate

Certificate No. AI-189210 Page No. 1 of 2

Customer Saudi Pultrusion Industries
P. O. Box 2531 Al Khobar 31952, K. S. A.

Certifies that the below listed equipment has been tested using a series of calibrated test equipment.

Item Submitted

Description	:	Fiber Glass FRP Corrugated Sheet
Test Location	:	Saudi Pultrusion Plant, Al Hassa Industrial
Manufacturer	:	Saudi Pultrusion Inc.
Test Method	:	SPI Simple test Procedure of deflection on specific load requirement
Product Dimension	:	Width 992 mm x Length 7000 mm x Thickness 8 mm
Material Weight	:	24 kg per Square Meter
Sample Number	:	# 1
Environment	:	36.2°C / 28%RH
Date Tested	:	28 September 2016
Test Description	:	As per SPI requirement. The entire deflection testing was performed only on a single sample of Fiber Glass FRP Corrugated Sheet by loading the specified uniform sequence of weights. A 5 minute holding time was observed per increment of all loading before measuring the deflection. The testing was carry-out between the separating base support to the required span out-ward from the center of the (UUT) Unit Under Test.

Tested By : _____ Test Engineer (Stamp)

Approved By: _____ Quality Manager

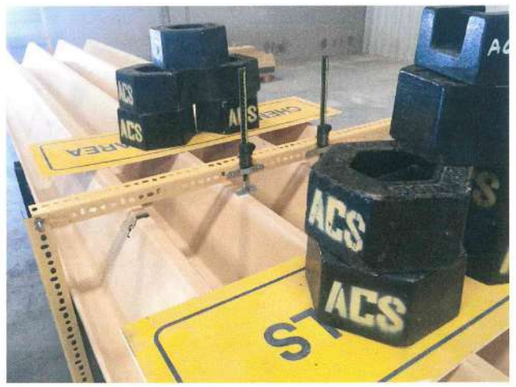
ACS-TC-102 Rev. 0

AL-HOTY CALIBRATION SERVICES

Certificate No. Al-189210 Page No. 2 of 2

Deflection Performance Test Report

Specified Load	Measured Mean Deflection					
	@ 2 meter	@ 3 meter	@ 4 meter	@ 5 meter	@ 6 meter	@ 7 meter
(kN)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
1.00	1.96	4.16	4.98	8.09	10.71	15.37
1.49	3.06	5.87	6.67	10.89	17.15	22.32
2.00	3.49	6.74	8.94	14.13	23.75	32.20
2.50	3.57	7.71	10.16	17.25	26.32	37.92



Reference Standard Used

Description	ACS ID No.	Cal. Due Date	Certificate No.	Traceability
Test Weight @ 20 kg (12 pcs)	ACS-KH-024	17 Nov. 2016	186261	NMCC, KSA / NIST, KSA & PTB, DE
Test Weight @ 10 kg (1 pc)	ACS-KH-322	05 Dec 2016	186813	NMCC, KSA / NIST, KSA & PTB, DE
Test Weight @ 5 kg (2 pcs)	ACS-KH-321	05 Dec 2016	186812	NMCC, KSA / NIST, KSA & PTB, DE
Test Weight @ 2 kg (2 pcs)	ACS-KH-340	02 Mar 2017	188631	NMCC, KSA / NIST, KSA & PTB, DE
Digital Depth Gauge	ACS-KH-469	04 Nov. 2016	180708	NMCC, KSA / NIST, KSA & PTB, DE
Digital Depth Gauge	ACS-KH-470	04 Nov. 2016	180709	NMCC, KSA / NIST, KSA & PTB, DE

End of Certificate

A BRANCH OF AL HOTY CO. LTD. AL-HOTY CALIBRATION SERVICES C.R. 2051015381 AL-KHOBAR

AL JAZZAR

OMAR JAZZAR CONSULTING ENGINEERS
Design, Supervision, Studies & Survey
Geotechnical, Materials Testing, Environmental, Water
LICENSE (CONSULT . 219, GEOTECH - 3)
MEMBERSHIP NO.: 9946 RIYADH / 6213 MADINA

الجـــــــزار

عمر جزار - مهندسون استشاريون
تصميم - إشراف - دراسات - مساحة
فحص تربة ، اختبار مواد ، بيئة ، مياه
ترخيص هندسي : ٢١٩ / فحص تربة - ٣
رقم العضوية : ٩٩٤٦ الرياض / ٦٢١٣ المدينة

ISO 9001: 2008 CERTIFIED ISO/ IEC 17025 : 2005 CERTIFIED

Client file # OJCE-RJ-M18-001

P. O. Box : 41956
Riyadh – 11531,
Saudi Arabia
10th March 2018

Messrs
Saudi Pultusion Industries
KAIA project, Jeddah,
Kingdom of Saudi Arabia

DESCRIPTION : FRP/GRP(Fiberglass Reinforced Plastic) Checkered Plate size 864mmx864mm, Thickness 5mm, 8mm & 12mm.

Summary of Test Method :
The Testing is conducted in different Loading System by applying Uniform & Concentrated Load for 5.00 Min. holding time and Measure the Deflection in Every Incremental Load Requirement.

Overall Remarks :
The Unit Under Test (UUT) was satisfactory withstand the given load, no visible Damage nor Deformation was Noticed after the test.

Uniform Load Deflection in mm

Deflection		Kg/m2			
THICKNESS(mm)	Weight per SQM	150	250	500	750
5	7.90	2.09	4.2	8.99	15.02
8	11.79	1.62	3.30	7.49	12.10
12	19.29	1.11	2.20	4.80	8.45

Concentrated Load Deflection in mm

Deflection		Kg/m			
THICKNESS(mm)	Weight per SQM	150	200	250	300
5	7.90	9.22	10.88	11.73	12.57
8	11.79	9.06	10.73	10.90	12.00
12	19.29	3.25	3.96	9.60	10.40

Yours Very truly,
FOR OMAR JAZZAR CONSULTING ENGINEERS
(Geotechnical & Materials Engineers)

Engr. S.TanvirAlem, M.Sc

OMAR JAZZAR CONSULTING ENGINEERS INDEPENDENT TESTING LAB. License 219 KAIA PROJECT-JEDDAH

RIYADH (H.O.) P.O. Box: 41956 ص.ب P. code 11531 الرمز البريدي
Tel. 4776512,4749953,4729494 Fax: 4776516 فاكس - email : ojce-ryd@jazzar.com.sa

Branch Offices :	Jeddah جـــدة	Madina المدينة	Qaseem القصيم	Jubail الجبيل	Hail حائـــل	Najran نجـــران	
TEL.	6696871	8238686	3262792	3418699	5344441	5223761	هاتف:
FAX	6612867	8285990	3262731	3418659	5346414	5223761	فاكس:

www.jazzar.com.sa

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OMAR JAZZAR CONSULTING ENGINEERS
Design, Supervision, Studies & Survey
Geotechnical, Materials Testing, Environmental, Water
LICENSE (CONSULT . 219, GEOTECH - 3)
MEMBERSHIP NO.: 9946 RIYADH / 6213 MADINA

الجـــــــزار
عمر جزار – مهندسون استشاريـون
تصميم - إشراف - دراسات - مساحة
فحص تربة ، اختبار مواد ، بيئة ، مياه
ترخيص هندسي : ٢١٩ / فحص تربة - ٣
رقم العضوية : ٩٩٤٦ الرياض / ٦٢١٣ المدينة

ISO 9001: 2008 CERTIFIED ISO/ IEC 17025 : 2005 CERTIFIED

Client file # OJCE-RJ-M18-001

Messrs
Saudi Pultusion Industries
KAIA project, Jeddah,
Kingdom of Saudi Arabia

P. O. Box : 41956
Riyadh – 11531,
Saudi Arabia
10th March 2018

DESCRIPTION: FRP/GRP(Fiberglass Reinforced Plastic) Pultruded Grating Thk.32mm, Series 406,Panel Weight Per Square Meter **19.75kg/m2.**

Summary of Test Method :
The Testing is conducted in different Loading System by applying Uniform & Concentrated Load for 5.00 Min. holding time and Measure the Deflection in Every Incremental Load Requirement.

Overall Remarks :
The Unit Under Test (UUT) was satisfactory withstand the given load, no visible Damage nor Deformation was Noticed after the test.

Uniform Load Deflection in mm

Deflection	Kg/m2			
SPAN(MM)	240	480	980	1200
600	0.80	1.64	2.28	2.97
900	1.54	3.45	4.98	5.11
1200	2.06	4.99	6.17	7.06
1500	5.14	7.98	11.57	14.46

Concentrated Load Deflection in mm

Deflection	Kg/m						
SPAN(MM)	300	450	600	750	1000	1500	3000
600	1.46	1.62	2.00	2.12	3.04	4.20	7.20
900	2.4	3.37	4.65	5.18	8	10.90	22.35
1200	7.18	8.05	12.15	13.25	18.08	25.70	45.62
1500	11.45	14.68	18.02	21.60	29.00	40.22	-

Yours Very truly,
FOR OMAR JAZZAR CONSULTING ENGINEERS
(Geotechnical & Materials Engineers)

Engr. S.TanvirAlem, M.Sc.

RIYADH (H.O) الرمز البريدي : P. code 11531 ص . ب P.O. Box 41956
Tel. 4776512,4749953,4729459 هاتف Fax: 4776516 : فاكس - email : ojce-ryd@jazzar.com.sa

Branch Offices :	جـــدة Jeddah	المدينة Madina	القصيم Qaseem	الجبيل Jubail	حائـل Hail	نجـران Najran	
TEL.	6696871	8238686	3262792	3418699	5344441	5223761	هاتف:
FAX	6612867	8285990	3262731	3418659	5346414	5223761	فاكس:

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LICENSE (CONSULT . 219, GEOTECH - 3)
MEMBERSHIP NO.: 9946 RIYADH / 6213 MADINA

الجـــــــزار
عمر جزار – مهندسون استشاريـون
تصميم - إشراف - دراسات - مساحة
فحص تربة ، اختبار مواد ، بيئة ، مياه
ترخيص هندسي : ٢١٩ / فحص تربة - ٣
رقم العضوية : ٩٩٤٦ الرياض / ٦٢١٣ المدينة

ISO 9001: 2008 CERTIFIED ISO/ IEC 17025 : 2005 CERTIFIED

Client file # OJCE-RJ-M18-001

Messrs
Saudi Pultusion Industries
KAIA project, Jeddah,
Kingdom of Saudi Arabia

P. O. Box : 41956
Riyadh – 11531,
Saudi Arabia
10th March 2018

DESCRIPTION : FRP/GRP(Fiberglass Reinforced Plastic) Pultruded Grating Thk.32mm, Series 606,Panel Weight Per Square Meter **14.00 kg/m2.**

Summary of Test Method :
The Testing is conducted in different Loading System by applying Uniform & Concentrated Load for 5.00 Min. holding time and Measure the Deflection in Every Incremental Load Requirement.

Overall Remarks :
The Unit Under Test (UUT) was satisfactory withstand the given load, no visible Damage nor Deformation was Noticed after the test.

Uniform Load Deflection in mm

Deflection	Kg/m2			
SPAN(MM)	240	480	980	1200
600	1.08	2.22	3.25	3.35
900	1.85	3.60	4.60	6.68
1200	2.80	5.30	12.2	16.01

Concentrated Load Deflection in mm

Deflection	Kg/m						
SPAN(MM)	150	300	450	600	750	1000	1500
600	1.35	1.54	2.44	2.97	3.12	4.03	5.75
900	3.40	4.75	6.73	8.04	8.91	12.22	16.70
1200	6.68	9.54	14.17	15.52	17.05	23.98	31.49

Yours Very truly,
FOR OMAR JAZZAR CONSULTING ENGINEERS
(Geotechnical & Materials Engineers)

Engr. S.TanvirAlem, M.Sc.

RIYADH (H.O) الرمز البريدي : P. code 11531 ص . ب P.O. Box 41956
Tel. 4776512,4749953,4729459 هاتف Fax: 4776516 : فاكس - email : ojce-ryd@jazzar.com.sa

Branch Offices :	جـــدة Jeddah	المدينة Madina	القصيم Qaseem	الجبيل Jubail	حائـل Hail	نجـران Najran	
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FAX	6612867	8285990	3262731	3418659	5346414	5223761	فاكس:

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Design, Supervision, Studies & Survey
Geotechnical, Materials Testing, Environmental, Water
LICENSE (CONSULT . 219, GEOTECH - 3)
MEMBERSHIP NO.: 9946 RIYADH / 6213 MADINA

الجـــــزار

عمر جزار – مهندسون استشاريون
تصميم - إشراف - دراسات - مساحة
فحص تربة ، اختبار مواد ، بيئة ، مياه
ترخيص هندسي : ٢١٩ / فحص تربة - ٣
رقم العضوية : ٩٩٤٦ الرياض / ٦٢١٣ المدينة

ISO 9001: 2008 CERTIFIED ISO/ IEC 17025 : 2005 CERTIFIED

Client file # OJCE-RJ-M18-001

P. O. Box : 41956
Riyadh – 11531,
Saudi Arabia
10th March 2018

Messrs
Saudi Pultusion Industries
KAIA project, Jeddah,
Kingdom of Saudi Arabia

DESCRIPTION : FRP/GRP(Fiberglass Reinforced Plastic) Pultruded Grating Thk.50mm, Series 606,Panel Weight Per Square Meter **20.15kg/m2.**

Summary of Test Method :
The Testing is conducted in different Loading System by applying Uniform & Concentrated Load for 5.00 Min. holding time and Measure the Deflection in Every Incremental Load Requirement.

Overall Remarks :
The Unit Under Test (UUT) was satisfactory withstand the given load, no visible Damage nor Deformation was Noticed after the test.

Uniform Load Deflection in mm

Deflection	Kg/m2			
SPAN(MM)	240	480	980	1200
600	0.48	0.90	1.20	1.98
900	1.25	1.31	1.97	2.15
1200	2.05	2.80	3.70	4.74

Concentrated Load Deflection in mm

Deflection	Kg/m						
SPAN(MM)	150	300	450	600	750	1000	1500
600	0.58	0.83	1.04	1.11	1.20	1.54	2.16
900	1.50	2.52	3.07	3.44	3.62	5.08	6.64
1200	2.99	3.70	5.39	5.79	6.44	9.7	14.07

Yours Very truly,
FOR OMAR JAZZAR CONSULTING ENGINEERS
(Geotechnical & Materials Engineers)

Engr. S.TanvirAlem, M.Sc.

OMAR JAZZAR CONSULTING ENGINEERS – INDEPENDENT TESTING LAB. – License 219 – KAIA PROJECT-RO0AR

RIYADH (H.O.) الرياض P.O. Box 41956 ص . ب P. code 11531 الرمز البريدي :
Tel. 4776512,4749953,4728452 هاتف Fax: 4776516 فاكس : email : ojce-ryd@jazzar.com.sa

Branch Offices :	جـــدة Jeddah	المدينة Madina	القصيم Qaseem	الجبيل Jubail	حائـــل Hail	نجـــران Najran	
TEL.	6696871	8238686	3262792	3418699	5344441	5223761	هاتف:
FAX	6612867	8285990	3262731	3418659	5346414	5223761	فاكس:

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SPI OUR CLIENTS

APPROVAL & CUSTOMERS

سابك sabic

ارامكو السعودية Saudi Aramco

الشركة السعودية للكهرباء Saudi Electricity Company

المملكة العربية السعودية الهيئة الملكية للجبيل وينبع Royal Commission for Jubail and Yanbu KINGDOM OF SAUDI ARABIA

مـــرافـــق MARAFIQ

SAMSUNG

Zamil Group

شركة المياه الوطنية National Water Company

المؤسسة العامة لتحلية المياه المالحة Saline Water Converstion Corporation

APPROVED VENDOR ID NO.

COMPANY	ID NO.
SAUDI ARAMCO	10035524
SABIC	504177
SAUDI ELECTRIC COMPANY	06748
SALINE WATER CONVERSION CORPORATION (SWCC)	1735
SAMREF (SAUDI ARABIAN MOBIL REFINERY)	10625
ROYAL COMMISSION (FILE NUMBER)	12478
JUBAIL CHEMICAL INDUSTRIES	101721
M. S. ALSUWAIDI	83381
SAUDI BIN LADEN	21303
ZAMIL STEEL	3905
SASREF (SAUDI ARABIAN SHELL)	1002353
KING FAHD UNIVERSITY OF PETROLEUM & MINERALS	2832
NESMA & PARTNERS	4269
SINOPEC	2008030081
ZAMIL LADDER	LS1242
NASSER AL- HAJRI	CL 02881
SAUDI AMANA	00730
REZAYAT CO.	516731
MOHAMMAD AL MOJIL	21011810
AZMEEL/SAUDI TURPANE	1620
AL HARBI	10046
MARAFIQ	1763
SAHARA Petrochemicals	101167

Saudi Arabian Oil Company
Purchasing Department
0-104, North Park 1
Dhahran 31311
Saudi Arabia

Tel.: (966 3) 874-0337
Fax: (966 3) 874-0315

January 10, 2007

SRM&LMU-002-07

Mr. Mohammad Z. Hamdan, General Manager
Saudi Pultrusion Industry
P. O. Box 2531
Khobar 31952

ارامكو السعودية
Saudi Aramco

Fax: 858-0202

Dear Sir:

We are pleased to inform you that your company now is included in the Saudi Aramco Supplier Information System, under Vendor no. 10035524, for the following products, provided your company continues to meet relevant Saudi Arabian and Saudi Aramco standards:

9COM	Description
6000000631	Grating; Fiberglass

This approval, however, should not be construed as a commitment by Saudi Aramco to purchase from you, but your company will have the opportunity along with other approved sources to respond to requests for submitting proposals in accordance with Saudi Aramco's established policies and procedures.

We would like to thank you for your interest in Saudi Aramco, and take this opportunity to reiterate that it is Saudi Aramco's policy to encourage the use of nationally manufactured materials.

For further information or assistance, please contact Husain M. Al-Saihati on 874-0321.

01/13/2007

Sincerely yours,
Bader A. Bin-Umar, Supervisor
Supplier Relation Mngt. & Local Mfr. Unit

Gentlemen,

Your company has been registered with SAMREF and the Vednor number # 10625. In future Correspondences you can use this number. For future business with SAMREF you should complete and periodically update pre-qualification documents. If you have supplied SAMREF with your Pre-qualification Documents within the last twelve (12) months, please disregard this request.

We request that you complete and return the enclosed Questionnaire to the Refinery Purchasing Department at your earliest convenience. Information furnished therein will, of course, be kept confidential.

Please furnish copies of the following with your complete questionnaire:

(a) Commercial Registration Certificate stamped at the back confirming its validity.
(b) Valid and Current Zakat Certificate.
(c) Valid and Current Chamber of Commerce Membership Certificate.
(d) Financial Statement for the fiscal year proceeding this year.
(e) Completed SAP Registration Form. (mandatory)
(f) Copies of ISO Certificate & Letters Agency representation.

Satisfactory completion and acceptance of a Supplier's Qualification documents does not constitute an obligation on the part of SAMREF to automatically invite you to bid for SAMREF's requirements. Supplier's performance in the execution of, or declination to bid for previous projects, or failure to supply the requested information within two weeks may result in SAMREF's inability to deal with your firm either now or in the future.

Supplier should submit one (1) copy of all required information and/or documentation.

Please contact the undersigned on 04-396-4594, if you have questions and/or require clarification.

Very truly yours,

Ebrahim H. Mohandiss
Purchasing & Logistics Superintendent

Thanks/Regards

GIMMY GEORGE
Documentation Clerk
Contracts, Purchasing & Warehouse (CP &W) Department
Saudi Aramco Mobil Refinery Co. Ltd. (SAMREF)
P.O. Box 30078, Yanbu Al-Sinaiyah
Kingdom of Saudi Arabia
e-mail: gimmy.george@samref.com.sa
Tel. +966-4-396 4230
Fax. +966-4-3964026

الشركة السعودية للكهرباء
Saudi Electricity Company

فرع المنطقة الشرقية
هاتف ٠٣-٨٥٧-٢٣٠٠ +٩٦٦-٣-٨٥٧-٢٣٠٠
فاكس ٠٣-٨٥٧-٦٦٠١ +٩٦٦-٣-٨٥٧-٦٦٠١
sec@saeco-east.com
ص.ب ٥١٩٠
الدمام ٣١٤٣٢
المملكة العربية السعودية

إدارة شئون المواد / دائرة المشتريات
المركز الرئيسي بالدمام – مبنى رقم ٣ – غرفه ٣٠٠ غرب
تلفون ٨٥٨-٦٦٥٤ فاكس ٨٥٨-٦٧٧٧
Materials Supply Department / Purchasing Division
Room # 3-300 W, SEC-ER HQS, Dammam
TEL 858-6654 FAX 858-6777

April 11, 2006

١٣ ربيع الأول ١٤٢٧ هـ

SAUDI PULTRUSION INDUSTRU ,
P.O. BOX # 2531 AL-KHOBAR 31952.

المصنع السعودي لصناعة البلتروجن .
ص.ب ٢٥٣١ الخبر ٣١٩٥٢

السلام عليكم ورحمة الله وبركاته ،

We are pleased to inform that your commercial documents have been evaluated and your Company is now registered with Saudi Electricity Company, Eastern Region under Vendor Code No. 06748.

يسرنا أن نخبركم بأننا قد استلمنا جميع الوثائق الخاصة بطلبكم في التعامل معنا وبعد تقويم المستندات تم تسجيلكم في الشركة السعودية للكهرباء – بالمنطقة الشرقية تحت رقم ٠٦٧٤٨ ،

We would suggest that you maintain a continuous contact with Vendor Liaison Unit of Purchasing Division on Phone No. 858-6654.

ونقترح بأن تكونوا على إتصال مستمر مع دائرة المشتريات – وحدة الاتصال بالتجار تلفون رقم ٨٥٨-٦٦٥٤ ،

To enable you to participate in our Quotation Requests, you may visit our web site www.se.com.sa/mmd/ for bidding instructions.

ولمزيد من المعلومات عن كيفية المنافسة في المناقصات المختلفة يمكنكم زيارة موقعنا على الشبكة www.se.com.sa/mmd/

We thank you for your interest to supply Saudi Electricity Co., in the Eastern Region.

شاكرين لكم رغبتكم في التعامل مع الشركة السعودية للكهرباء– بالمنطقة الشرقية .

Regards,
Very truly yours,

مع أطيب تحياتي ،

SUHAIL Y. AL-ALI
Purchasing Manager

سهيل يوسف العلي
مدير دائرة المشتريات

SHARED SERVICES **SABIC** سابك sabic

FAX MESSAGE

To	: SAUDI PULTRUSION INDUSTRY	Date	: 14 March 2006
Attention	: MOHAMMAD Z. HAMDAN	Tel. No.	: 038580404
		Fax No.	: 038580202
Subject	: QUALIFICATION	Total # Page/s	: 1

Dear Mohammad:

Based on business needs, we are pleased to report that you have been qualified under Vendor # 504177.

Qualification means that you are eligible to receive requests for quotations and orders for the designated materials and/ or services. However, there is no guarantee that you will receive any such requests or orders.

Thank you for your interest in being a supplier to **SABIC**.

Best regards,

EMAD N. AL-MOGHARBIL
Senior Qualification Analyst
Supplier Qualification Section
SABIC
Tel: 00966 3 340 1986
Fax: 00966 3 340 1850
E-mail: mogharbil@sabic.com

RECEIVED 14 MAR 2006

Note: For Supplier Information update, please contact the following:
Supplier Qualification Section - Projects & Turnaround Dept.
Saudi Basic Industries Corporation (SABIC)
Shared Services - Supply Management Organization (SMO)
P. O. Box 11115, Jubail Industrial City 31961
Kingdom of Saudi Arabia
TEL.: 00966-(3)-340-1808 / 1803 / 1986 / 1819 / 1826
FAX : 00966-(3)-340-1860
EMAIL: sq@sabic.com

ملاحظة - في حال أو عند حدوث أي تغير في المعلومات الرجاء الاتصال على العنوان التالي :
قسم تأهيل الموردين - إدارة المشاريع و الصيانة الدورية
الشركة السعودية للصناعات الأساسية (سابك)
الخدمات المشتركة - قطاع المشتريات
صندوق بريد : 11115 مدينة الجبيل الصناعية: 31961
المملكة العربية السعودية
هاتف رقم : 00966-(3)-340-1808 / 1803 / 1986 / 1819 / 1826
فاكس رقم : 00966-(3)-340-1860
بريد الكتروني : sq@sabic.com

مرافق MARAFIQ

Fax

To:-	Ahmed Al-Arfaj	From	Khalid Al-Otaibi
Company	Abdullatif Al-Arfaj & Brothers Holding Co.	Department	Material Dept.
Fax Number	03 858 0202	Fax Number	+966 340 1292
Tel number	03 858 0404	Tel number	+ 966 3 341 0747 Ex 3737
Date	17 APRIL 2006	E-mail	otaibik@marafiq.com.sa
Total pages	1		

Attention Mr. Ahmed

We are pleased to inform you that your company has been registered in the MARAFIQ SAP vendor registry and your vendor number is **1763.**
Your company is now qualified to participate in any bidding process that MARAFIQ may offer in the future.

We look forward to a long and mutually beneficial relationship with your company.
Yours faithfully,

Khalid F. Al-Otaibi
Procurement superintendent

Power and Water Utility Company for Jubail and Yanbu
- Jubail (Headquarters)
  Jubail Industrial City 31961 • PO Box 11133
  Tel +966 3 340 1111 • Fax +966 3 341 6129
- Yanbu
  Yanbu Industrial City • PO Box 30144
  Tel +966 4 396 6000 • Fax +966 4 321 0367
Kingdom of Saudi Arabia

Saudi Joint-Stock Co.
Capital SR 2.6 billion
CR 2055004968

17/04 2006 16:49 FAX 00966 3 3401281 MARAFIQ MATERIALS DEPT 001

KINGDOM OF SAUDI ARABIA
Royal Commission For Jubail & Yanbu
Directorate General For Jubail Project
Procurement Department

المملكة العربية السعودية
الهيئة الملكية للجبيل وينبع
الإدارة العامة لمشروع الجبيل
إدارة العقود والمشتريات

نموذج تسجيل الموردين
Suppliers Registration Form

File Number : 12478 Date : JANUARY 21, 2006

1- Supplier Name : ١ – اسم المورد :
SAUDI PULTRUSION INDUSTRY المصنع السعودي لصناعة البلتروجن

2 - Mailing Address :- ٢ – عنوان المراسلة :-
P.O.BOX : 2531 City AL-KHOBAR ص . ب : ٢٥٣١ المدينة : الخبر
City Code : 31952 الرمز البريدي : ٣١٩٥٢
Country SAUDI ARABIA الدولة : المملكة العربية السعودية
Telephone : 858-0404 Fax : 858-0202 هاتف : ٨٥٨٠٤٠٤ فاكس : ٨٥٨٠٢٠٢
www.saudi-pultrusion.com E-Mail : hamdan@saudi-pultrusion.com brummel@saudi-pultrusion.com

3 - Degree of Ownership : ٣ – نسبة الملكية السعودية :
(x) 100% Saudi (x) سعودية ١٠٠%
( ) Joint Venture / Partnership Co. ( ) سعودية أجنبية
( ) 100% Foreign ( ) أجنبية ١٠٠%

4 -Type of Business : Manufacturer of FRP (Fiberglass Reinforced Plastic) Profiles & Grating ٤ – النشاط التجاري : منتجات الفيبرجلاس بطريقة البلتروجن

5-Commercial Reg./License/Zakat : ٥ – السجل التجاري/الرخصة/الزكاة :
Number : 2257027567 الرقم : ٢٢٥٧٠٢٧٥٦٧
Issue Date : 20/1/1423HD City : DAMMAM التاريخ : ١٤٢٣/١/٢٠ هـ مدينة : الدمام
Zakat File Number : 2305 رقم ملف شهادة الزكاة : ٢٣٠٥
(Attach Copies of above certificates) (ترفق صور من الشهادات أعلاه)

6 - List of Companies represented by your firm ٦ – الشركات التي يمثلها المورد (ترفق قائمة بأسماء الشركات)

Owner / Manager Name : اسم المالك / أو المدير
MR. ABDULLATIF M. AL-ARFAJ - OWNER عبد اللطيف محمد العرفج
MR. MOHAMMED HAMDAN - GENERAL MANAGER

Signature and Stamp : التوقيع والختم :
P.O.BOX 10001 JUBAIL INDUSTRIAL CITY 31961 ص . ب : ١٠٠٠١ مدينة الجبيل الصناعية ٣١٩٦١
ROCUREMENT DEPARTMENT إدارة المناقصات والمشتريات
(P:\ALLDOC)

Saudi Pultrusion Industries Lic. # 1189

KINGDOM OF SAUDI ARABIA
Royal Commission For Jubail & Yanbu
Directorate General For Jubail Project
Procurement Department

المملكة العربية السعودية
الهيئة الملكية للجبيل وينبع
الإدارة العامة لمشروع الجبيل
إدارة العقود والمشتريات

نموذج تسجيل الموردين
Suppliers Registration Form

File Number : 12478 Date : JANUARY 21, 2006

1- Supplier Name : ١ – اسم المورد :
SAUDI PULTRUSION INDUSTRY المصنع السعودي لصناعة البلتروجن

2 - Mailing Address :- ٢ – عنوان المراسلة :-
P.O.BOX : 2531 City AL-KHOBAR ص . ب : ٢٥٣١ المدينة : الخبر
City Code : 31952 الرمز البريدي : ٣١٩٥٢
Country SAUDI ARABIA الدولة : المملكة العربية السعودية
Telephone : 858-0404 Fax : 858-0202 هاتف : ٨٥٨٠٤٠٤ فاكس : ٨٥٨٠٢٠٢
www.saudi-pultrusion.com E-Mail : hamdan@saudi-pultrusion.com brummel@saudi-pultrusion.com

3 - Degree of Ownership : ٣ – نسبة الملكية السعودية :
(x) 100% Saudi (x) سعودية ١٠٠%
( ) Joint Venture / Partnership Co. ( ) سعودية أجنبية
( ) 100% Foreign ( ) أجنبية ١٠٠%

4 -Type of Business : Manufacturer of FRP (Fiberglass Reinforced Plastic) Profiles & Grating ٤ – النشاط التجاري : منتجات الفيبرجلاس بطريقة البلتروجن

5-Commercial Reg./License/Zakat : ٥ – السجل التجاري/الرخصة/الزكاة :
Number : 2257027567 الرقم : ٢٢٥٧٠٢٧٥٦٧
Issue Date : 20/1/1423HD City : DAMMAM التاريخ : ١٤٢٣/١/٢٠ هـ مدينة : الدمام
Zakat File Number : 2305 رقم ملف شهادة الزكاة : ٢٣٠٥
(Attach Copies of above certificates) (ترفق صور من الشهادات أعلاه)

6 - List of Companies represented by your firm ٦ – الشركات التي يمثلها المورد (ترفق قائمة بأسماء الشركات)

Owner / Manager Name : اسم المالك / أو المدير
MR. ABDULLATIF M. AL-ARFAJ - OWNER عبد اللطيف محمد العرفج
MR. MOHAMMED HAMDAN - GENERAL MANAGER

Signature and Stamp : التوقيع والختم :
P.O.BOX 10001 JUBAIL INDUSTRIAL CITY 31961 ص . ب : ١٠٠٠١ مدينة الجبيل الصناعية ٣١٩٦١
ROCUREMENT DEPARTMENT إدارة المناقصات والمشتريات
(P:\ALLDOC)

Saudi Pultrusion Industries Lic. # 1189

Observations:

1. Saudi Pultrusion Industry has brought in modern technology and machinery that manufacture Fiberglass Reinforced Plastic (FRP or GRP) which is alternative replacement and substitute to steel, aluminum and timber where long term performance in an aggressive and corrosive environment is required.
2. SPI is a newly company that started to produce FRP products for almost 1 year only. Offices, Factory Facilities, Equipment and machineries are also new.
3. Pultrusion pulls the continuous fiber reinforcement in roving or mat/roving form through a resin bath where each fibre is coated with a formulated resin.
4. The advantage and benefits of FRP products than steel and aluminum are:
   4.1 Strength is up to 30% more tensile than mild steel and 50% more tensile strength than aluminum.
   4.2 Better Insulation Qualities than steel.
   4.3 Corrosion Resistant- It will not oxidise or corrode.
   4.4 75% less lighter than steel.
   4.5 Simply for Installation

ctivities :

1. Meeting with the SPI Sales Manager, Production Manager and QA/QC Inspector regarding the Company Profile, Pultrusion Work Process, FRP Characteristics, FRP Advantages and Quality Assurance & Standards.
2. Drawings, Certificates, Quality Procedures, Inspection Records, Testing results and other documents review and disscussions.
3. Presentation of Pultruded FRP products.
4. Computer presentation on how Pultrusion Fiberglass Reinforced Plastic (FRP) Process.
5. Factory visit and inspection of facilities, machines, equipment and raw materials used in pultrusion process such as resin, rovin, mat and veil.
6. Witnessed and inspection the mixing of resin and chemicals subject for FRP processing and production.
7. Witnessed and inspection of Production from chemicals and materials to finished products.
8. Visually and dimensionally inspection of the finished products as per required length, design, thickness and appearance.

Conclusion :

1. SPI has a consistency in the production of Fiberglass Reinforced Plastic (FRP) composite products, a Quality Assurance System is followed and maintained as per the procedures set in company's EN ISO 9001:2000 manual.
2. Guidelines in determining the dimensional and physical property capabilities and performance of the FRP products are as per ASTM standards.
3. Saudi Pultrusion Industry meets our standards for manufactured and supply of FRP Handrails and Ladders for Tasnee Ethylene Project.
4. SPI are accepted and approved in accordance with our Project requirements and specification.

Reported by : Pablito D. Canlas Jr.
SEJ QA/QC Inspector

Reviewed by : H. I. Jeon
SEJ QA/QC Manager

SAMSUNG

Job No:SC 2060

TASNEE ETHYLENE PROJECT

TASNEE Petrochemicals

Ref No.: E-SEJ-SPI-QSR-0053

Quality Surveillance Report

Date of Visit : 04 Nov. 2006 **Time :** 0930 ~ 1230 HRS

Company Details :

Name : **Saudi Pultrusion Industry**
Member of Abdullatif Al-Arafaj & Brothers Holding Co.
Address . : Al-Hassa Industrial Area
Saudi Arabia
Telephone : +966 3 534 2266
Fax No. : +966 3 534 2299

Contact Person :

Mr. Brummel A. Esperancilla
Sales Manager

Scope of Work :

Manufacture and Supply of pultruded Fiberglass Reinforced Plastic (FRP) Ladder and Handrail for Cooling Tower - Tasnee Ethylene Project Jubail Saudi Arabia.

Purpose of Visit :

1. Factory Inspection and Surveillance for the manufecturing of pultruded FRP Products such as Handrail System & Ladders, Prefab Walkways & Platforms, Gratings & Support, Cooling Tower Components, Safety Cages, Planks, Profiles and Brackets.
2. To check and evaluate general quality requirements about materials, design, process, inspection, test, data items, packaging or shipping and implementation as per project standards and specifications.

Visitor:

Name	Company	Position
Mr. Ashpak Mian	IMT	QA/QC Inspector
Mr. P. D. Canlas Jr.	SEJ	QA/QC Inspector

المملكة العربية السعودية
وزارة الشئون البلدية والقروية
أمانة المنطقة الشرقية

الرقم
التاريخ
المرفقات

أمانة المنطقة الشرقية
إدارة الجودة
رقم القيد: ١٤٣٤/٣٥٩٦٩

وكالة التعمير والمشاريع
إدارة الجودة

الموضوع: بخصوص تأهيل المصنع السعودي للبلتروجين

السادة / المصنع السعودي لصناعة البلتروجين المحترمين

ص ب ٢٥٣١ الخبر ٣١٩٥٢- تليفون ٠٣٨٤٧٧٦١٢ -فاكس ٠٣٨٤٧٧٦١٤

السلام عليكم ورحمة الله وبركاته

إشارة إلى خطابكم رقم SPI/٣٣٥ الوارد إلينا بتاريخ ١٤٣٤/٠٩/٠٦هـ بخصوص طلب تأهيل مصنعكم لتوريد مواد منتجات الفيبر جلاس وتطبيقها كمثال (المشايات الأرضية – والأرضيات – الدرابزين – السلالم) وإلى تنسيقكم وترتيباتكم لزيارة المصنع للتأكد من الجودة ومطابقة المواصفات والتي تمت بتاريخ ١٤٣٤/١٠/٢٢هـ.

عليه، نفيدكم بأنه لا مانع من اعتماد مصنعكم لتوريد مواد منتجات الفيبر جلاس وتطبيقها كمثال (المشايات الأرضية – والأرضيات – الدرابزين – السلالم) لمشاريع أمانة المنطقة الشرقية ويمكن التنسيق بين المقاولين والشركة على أن يقوم المقاولون بتقديم اعتماد مواد منتجات الفيبر جلاس وتطبيقها كمثال (المشايات الأرضية – والأرضيات – الدرابزين – السلالم) حسب توافقها مع المواصفات لكل مشروع وهذا الاعتماد لمدة سنة من تاريخه كما يحق للأمانة إلغاء هذا الاعتماد في حالة مخالفة الشروط والمواصفات الفنية.

ولكم تحياتي،،،

مدير إدارة الجودة

م/ خالد بن ناصر السويدان

ص.ب ٢٨٧٠ - الدمام ٣١١٤٦ - تلفون ٨٣٤١٠٠٠ - فاكس ٨٣٣٩٩٧٧
P.O.Box 2870 - Dammam 31146 - Tel. : 8341000 - Fax : 8339977 - www.e-amana.gov.sa

زامل
مصنع السلالم
Zamil
Ladder Factory

Date: 28 May 2006

Certificate of Conformity

To whom it may concern:

This is to confirm that the materials manufactured and supplied by Saudi Pultrusion Industry against our Purchase Order No. 3247 and 3248 dated 14 Nov. 2005, are in accordance with our requirements and specification.

We are very much satisfied in dealing with Saudi Pultrusion Industry for their supply of material.

Best regards,
ZAMIL LADDER FACTORY

Binu Cherian
Plant Manager

C.R. 2051002758 / 048
Paid Capital S.R. 2,000,000
Industrial License No. 960/S
Dated 19 / 12 / 1413

P.O. Box 3409 - Dammam 31471
Kingdom of Saudi Arabia
Tel. : +966 (03) 847 3544
Fax : +966 (03) 847 1459

E-mail: ladders@zamilladders.com
Website : www.zamilladders.com

ISO 9001:2000
UKAS

To : Saudi Pultrusion Industries

Attn: General Manager

Fax No.: 013 534 2299

Tel No. :013 534 2266

AlFanar Construction Co. (Bena)
POSTAL ADDRESS: P. O. BOX 15203
Jeddah 21422 – K.S.A
Tel: 0126911687x101Fax:012 4945468
Mobile: 056 342 0060
E-Mail: Alaa.saad@alfanar.com

Our Ref : ALFCO/SPI/01/14

Date : 20/ 09/ 2014

PROJECT: Jeddah R.O. -III Project.

Subject: Material Acceptance

Dear Sir,

With great pleasure we inform you that your FRP/GRP material have been accepted for our R.O. Jeddah III Project.

The approval we received in for material that we use in Grating, Handrail, Ladder and supports it have been proven to be equal, if not exceeding the specification of the required material.

We thank you for your good response on delivery and we hope to see your factory prosperous and producing more profiles.

Thank you and best regards,

Alaa Saad
Executive Manager, Projects
Al Fanar Construction Co.

21/09/14

PROJECTS REFERENCE

S. No.	Project Title	Client Name/ End User	Scope of Work/Specification	Year of Supply	Role in Supply
1	Dammam, Saudi Arabia	Zamil Ladders	FRP Ladders Profiles	Nov.2005	E/M/S
2	SWCC Project, Jeddah, Saudi Arabia	Saudi Composites Saline Water Conversion Corp.	Handrails/Ladder profiles	Feb. 2006	M/S
3	Grid Station, Bahrain	Al Johi Fiberglass	Gratings	March 2006	M/S
4	Infrastructure Proj., Jubail, Saudi Arab	Al Khodari & Sons Royal Commission	Platform, Handrails, Ladders	May 2006	E/M/S
5	Desalination Plant, Jubail, Saudi Arabi	Al Mabani/Saudi Condreco Saline Water Conversion Corp	Gratings	May 2006	M/S
6	Infrastructure Proj. Jubail, Saudi Arabi	Al Harbi Contg. Royal Commission	Platform, Handrails, Ladders	May 2006	E/M/S
7	Dammam, Saudi Arabia	Hamza Fatayerji Est.	Handrails	June 2006	M/S
8	Samref Project, Yanbu, Saudi Arabia	Fluor Arabia Ltd. Saudi Aramco	Platform, Handrails, Ladders	August 2006	E/M/S
9	Infrastructure Proj., Jubail, Saudi Arab	Al Ertifaa Const. Co. Ltd. Royal Commission	Ladders	Sept. 2006	E/M/S
10	Bahrain	BFG Commercial	Handrails	Sept. 2006	M/S
11	Desalination Plant, Jubail, Saudi Arabi	Almacon Saline Water Conversion Corp.	Gratings	Nov. 2006	M/S
12	Jubail, Saudi Arabia	Al Yussr Townsend	Gratings	Nov. 2006	M/S
13	DIP District Cooling Tower, Dubai	SPIG SPA	Cooling Tower Components	Nov. 2006	M/S
14	Dammam, Saudi Arabia	ATC Specialized Welding Co. Saudi Aramco	Gratings	Dec. 2006	M/S
15	Tasnee Project, Jubail, Saudi Arabia	Samsung Co. Ltd. Sabic/Royal Commission	Handrails, Ladders	Dec. 2006	E/M/S
16	Palm Jumeriah, Dubai	Hamon Thermal (France)	Platform, Handrails, Ladders, Gratings	Dec. 2006	M/S
17	Al Khobar, Saudi Arabia (Qatar Proj.)	Eastern Gate	Cable Tray Component	Dec. 2006	M/S
18	Road/Infrastructure Proj. Jubail, KSA	Al Harbi Contracting Co. Ltd. Royal Commission	FRP Reebar	Jan. 2007	S
19	Desalination Plant, Jubail, Saudi Arabi	Saline Water Conversion Corp.	Handrails, Ladders/Platform	Feb. 2007	E/M/S/I
20	Hidd Desal/Power Plant, Bahrain	G. P. Zackaraides	Gratings, Handrail and Safety Cage	Feb. 2007	M/S
21	Jana Expansion Project, Jubail	Jubail Operation & Maintenance	Gratings	March 2007	M/S
22	Sewage Treatment Plant, Muscat	Al Dastoor Trading & Contg.	Grating, Handrail, Platform & Ladder	March 2007	E/M/S
23	Doha, Qatar	Al Muftah Fibregralss Co.	FRP Profiles (tubes & rungs)	April 2007	M/S
24	RT Sea Island Project (offshore)	Mohammad Al Mojil Group Saudi Aramco	Gratings	May 2007	M/S
25	Berri Plant, Drainage Cluster System	Al INassar Trading & Contg. Saudi Aramco	Gratings	May 2007	M/S
26	Waste Treatment Facilities Upgrade Jeddah Refinery & Marine Area	M. R. Al Khatlan Saudi Aramco	Ladder & Safety Cage	May 2007	M/S
27	Dhahran Housing Drainage System	Bader Al Husseini Est. Saudi Aramco	Gratings	July 2007	M/S
28	KAIA Airport, Jeddah	Hamon Thermal Europe Y.B.A. Kanoo	Structural Profiles for Cooling Tower	Aug. 2007	M/S
29	Battery Charging Area Dhahran	Green Top Contracting Co. Saudi Aramco	Gratings	Oct. 2007	M/S
30	Jubail Infrastructure	Al Khodari & Sons Royal Commission	Handrail System	Oct. 2007	M/S
31	Sewage Treatment Plant - Rahima	Nesma Al Fadl Saudi Aramco	Platform, Gratings, Handrails & Ladder	Nov. 2007	E/M/S
32	Bahrain Petroleum Company	Project Const. Co. Bahrain Bapco	Decorative Fencing	Nov. 2007	E/M/S

S. No.	Project Title	Client Name/ End User	Scope of Work/Specification	Year of Supply	Role in Supply
33	Amiantit, Oman	Oman	Ladder	Dec. 2007	M/S
34	Cooling Towers	Alasco (Al Dossary) Saudi Aramco	Gratings & Checkered Plate	Dec. 2007	M/S
35	Hidd Power Plant, Bahrain	G.P. Zackaraides, Bahrain		Dec. 2007	M/S
36	Jubail C31R Infrastructure	Al Harbi Contg. Co. Royal Commission	Handrail, Ladder and Platform	Jan. 2008	E/M/S
37	Zamil Tower Galvanizing Plant	Zamil Steel	Grating	Feb 2008	M/S
38	Cooling Towers Structures	Sanpco, Iran	FRP Profiles	March 2008	M/S
39	Cooling Towers Facilities	University of Petroleum & Mineral Dharan	Gratings and support	March 2008	E/MS
40	Industrial Facilities	Jubail Chemical Industries	Ladders, Handrails & Platform	March 2008	E/M/S
41	Al Waha Project	Al Khodari Jubail	Ladder, Handrail & Platform	April 2008	E/M/S
42	Aramco, Abaqaiq	Saleh Al Massoud (Asamco) Saudi Aramco	Ladder	April 2008	M/S
43	Concrete Rehabilitaion Work (SWCC) Valve Pit Covers	Saudi Condreco/Al Mabani Jubail	Gratings/Checkered Plate	May 2008	E/M/S
44	Bulk Plant Refinery, Riyadh	Issam Kabbani Saudi Aramco	Ladder & Safety Cage	May 2008	E/M/S
45	Bahrain	Bahrain Fibreglass Group	Handrail System	June 2008	M/S
46	Khurais Crude Oil Project	Modern Arab Const./Kettaneh Saudi Aramco	Gratings	June 2008	M/S
47	Sewage Treatment Plant - Udaliyah	M. S. Al Suwaidi Saudi Aramco	Gratings	July 2008	M/S
48	Desalination Plant, Jubail - Marafic	Huta Marine	Ladder and Safety Cages	July 2008	M/S
49	Sanitary Project - Jeddah	Shairco	Ladder/Safety Cage/Handrails	July 2008	M/S
50	FRP Bench	Issam Kabbani	Projefile, oval shape	July 2008	M/S
51	Sewage Project - Bahrain	BFG Commercial Services	Ladder	August 2008	M/S
52	Desalination Plant, Jubail - Marafic	Kin Jin Kan Contg. Co.	Gratings	Sept. 2008	M/S
53	Manefa Project & Khurais Common Fa	Ahmad Ali Bin Ali	Ladder & Support Post	Jan. 2009	M/S
54	Al Hassa Irrigation	Al Hassa Irrigation Authority	Grating & Handrail	Jan. 2009	M/S/I
55	KFUPM Facilities - Dammam	King Fahad Univ. Pet. & Min.	Grating & Platform	Jan. 2009	M/S/I
56	Sewage Treatment Plant - Udhaliyah	M.S. Al Suwaidi	Grating, Platform & Ladder	Feb. 2009	M/S
57	Rabigh Cable Factory	Nesma & Partners	Ladder	Feb. 2009	M/S
58	Shaybaa Project	Nesma & Partners	Heavy Duty Grating/Checkered Plate	Feb. 2009	M/S
59	Sewage Treatment Plant - Dhahran	M. S. Al Suwaidi Saudi Aramco	Ladder, Platform, Handrail & Checkerd Plate	Feb 2009	M/S
60	Sanitary Works - Jeddah	Shairco	Ladder and Platform	Mar 2009	M/S
61	Aminatit - Oman	Amiantit	Ladder & Profiles	Mar 2009	M/S
62	Cooling Tower - Dubai	Hamon Adearest	Platform/Staircase/Ladder	Mar 2009	M/S
63	Chemanol Factory	Naser Al Hajri	Platform/Ladder/handrail	Apr-09	M/S
64	Sewage Treatment Plant - Safaniya	M. S. Al Suwaidi Saudi Aramco	Ladder	Apr-09	M/S

S. No.	Project Title	Client Name/ End User	Scope of Work/Specification	Year of Supply	Role in Supply
65	Jubail Infrastructure Project	Azmeel	Platform/Handrail/Ladder	Apr-09	M/S
66	Maaden - Jubail	Samsung	Grating	May-09	M/S
67	Maader - Jubail	Gama	Grating & Curve Angle	May-09	M/S
68	KFUPM - Dhahran	KFUPM	Grating/Platform	May-09	M/S
69	Abqaiq Refinery	Salem Duwaim Est. Aramco	Grating	June'09	M/S
70	Al Durr Desal Plant - Bahrain	G. P. Zackaraides	Handrail, Ladder & Safety Cage	June'09	M/S
71	Jubail Infrastrucrue Co2	Al Harbi Contg. Co. Ltd.	Ladder, Handrail & Grating	July'09	M/S
72	Kayyan Project - Jubail	Sinopec	Grating	July'09	M/S
73	Infrastructure Project - Jubail	Saudi Bin Laden	Handrail	Aug.'09	M/S
74	Princess Nhoura University - Riyadh	El Seif/CCC	Ladder & Safety Cage	Nov.'09	M/S
75	Sewage Treatment Plant - Heet Riyadh	Al Khorayef	Grating	Nov.'09	M/S
76	Sasref (Shell) Cooling Tower - Jubail	CBI Llumus	Ladder, Handrail & Checkered Plate	Nov.'09	M/S
77	Zamil Galvanizing Plant - Dammam	Zamil Steel	Grating, Handrail & Checkered Plate	Dec.'09	M/S
78	Sewage Treatment Plant - Safaniya	M. S. Al Suwaidi	Ladder	Dec.'09	M/S
79	Maaden Project - Ras Al Zour	Nesma & Partners	Grating	Dec.'09	M/S
80	Al Uqair Beach Resort	Amana Al Hassa	Platform, grating, handrail	Jan.'10	M/S/I
81	North Park Complex - Dhahran	Al Yamama Company Saudi Aramco	Grating	Jan.'10	M/S
82	National Gas Company	Al Saamani Co.	Special profiles for gas tank	Feb.'10	M/S
83	Bahrain Petroleum Co.	Al Mameri Contg.	Handrail	Feb.'10	M/S
84	Manifa Project	Modern Arab. Const. (Aramco)	Grating	Mar'10	M/S
85	Jubail 072 C31R	Al Harbi Contg.	Ladder	Mar'10	M/S
86	Sahara Project Jubail	Sinopec	Grating	Mar'10	M/S
87	Sewage Treatment Plant - Rabigh	M.R. Al Khatlan (Aramco)	Grating, handrail, ladder	Mar'10	M/S
88	Kaust - Dammam	S. Al Hareth (Aramco)	Handrail	Jun'10	M/S
89	SWCC - Jeddah	Abdullah al Zamil	Grating, handrail, ladder	June'10	M/S
90	Oman	Amiantit	Ladder	July'10	M/S
91	Sewage Tratement Plant	ICDOC	Handrail	July'10	M/S/I
92	Jubail Infrastructure Project	Al Oasis Contg.	Grating Platform	Aug'10	M/S/I
93	Jubail Infrastructure Project	Saudi Tumpane	Ladder/grating	Aug'10	M/S
94	Sewage Treatment Plant - Jeddah	Aziz co. National Water Company	Handrail, ladder, grating	Aug'10	M/S
95	Cooling Tower	Composites Solutions	Grating	Aug'10	M/S
96	Ras Al Zawr Project	Jes Allianz	Ladder	Sept.'10	M/S

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97	SWCC - Jeddah	Mitsubishi Heavy Inds.	Handrail/ladder	Sept.'10	M/S
98	Aramco Project	Ammu Steel	Grating	Sept.'10	M/S
99	Chlorovinyl Project	Abdullah Al Khalifa	handrail, grating	Sept.'10	M/S
100	Cooling Tower - Rastanura	Saudi Aramco	Corrugated Sheet	Oct'10	M/S
101	Aramco Housing Projects	Rezayat co.	Grating	Oct'10	M/S
102	Aramco Housing Projects	Arnout Contg. co.	Grating	Oct'10	M/S
103	Princess Nouhra University Riyadh	El Seif/CCC	Ladder & Safety Cage	Oct'10	M/S
104	Infrastructure Project Jubail	Azmeel Contg. Co.	Ladder and grating	Nov.'10	M/S
105	Chlorovinyl Project Jubail	Zamil Steel	Grating and handrail	Dec.'10	M/S
106	SEC Project	Al Dahiel Al Malfi	Grating	Dec.'10	M/S
107	Private Factory	Metals Engineering co.	Grating	Dec.'10	M/S
108	Jeddah Project	Jubar International	Grating and handrail	Jan.'11	M/S
109	Sewage Treatment Plant - al Kharj	Al Khorayef Company National Water Company	Handrail and grating	Jan.'11	M/S
110	Jubail Infrastructure Project	Saudi Bin Laden	Handrail and ladder	Feb.'11	M/S
111	EXPEC Auditorium	Issam Kabani - Aramco	Grating	Mar'11	M/S
112	Water Tank Facilities	Ministry of Agriculture	Grating,handrail and ladder	Mar'11	M/S/I
113	JER Project Jubail	Saudi Amana Contg. co.	Grating	Apr'11	M/S
114	MEW Project Kuwait	3B General Contg.	Gratiing, handrail and ladder	Apr'11	M/S
115	Cooling Tower - Dhahran	Johnson Control (Aramco)	Grating	Apr'11	M/S
116	Private Factory - Bahrain	Faba Contg.	Various FRP profiles	Apr'11	M/S
117	Qatar Project	Al Muftah Fibreglass Co.	Various FRP profiles	May'11	M/S
118	SEPCO Rabigh Power Plant	Mothib Afnan Al Nafey	Grating	May'11	M/S
123	STP Hayer Project - Riyadh	Aziz Company National Water Company	Handrail, grating and Ladder	Jun'11	M/S
124	SWCC Project Jeddah	Al Fanar Co.	Platform, grating and Handrail	Jun'11	M/S
125	Jeddah Mainlines of waste water	Al Harbi Trdng. & Contg. National Water Company	Platform, Handrail, Ladder & Cages	July'11	M/S/I
126	Bapco Water Screen Barrier	Raffa Const. Co.	Security Barrier	July'11	M/S
127	Princess Noura University Riyadh	CCC El Seif	Ladder and cages	July'11	M/S
128	Ladder Factory	Zamil Ladder	Profiles for Ladder	Aug'11	M/S
129	Marafiq Projedt Jubail	Al Manar	Checkered Plate & Handrail	Sept'11	M/S
130	Aramco Bulk Plant Rabigh	M. S. Al Suwaidi	Ladder	Sept'11	M/S
131	Fibreglass Factory - Oman	Amiantit Oman	Profiles for Ladder	Sept'11	M/S
132	Fibreglass Factory - Australia	Wagner	Profiles for handrail	Sept'11	M/S

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133	Beverage Plant	Mohammad Sayeed Co.	Grating	Oct'11	M/S
134	Infrastructure Project Jubail	Azmeel	Handrail & Ladder	Oct'11	M/S
135	Choloviny Project	Yanbu Steel Co.	Grating	Oct'11	M/S
136	Private Recreational Facility	Isshamaquatic	Grating	Oct'11	M/S
137	WWTP Jeddah Project	Al Fanar	Handrail, Grating Corrugated Sheet	Oct'11	M/S
138	SWCC project Jeddah SRO III	Saudi Archirodon	Grating, handrail, corrugated sheet	Octo'11	M/S
139	Jetty Refinery Jubail	Saudi Amana	Grating	Oct'11	M/S
140	AlKhomra Sewage Treatment Plant	Abujadayel Co. National Water Company	Handrail	Oct'11	M/S
141	Rabigh Power Plant	Sepco III	Grating	Nov'11	M/s
142	Bapco Bahrain	Rapco/Bapco	Barrier	Nov'11	M/S
143	Jubail Infrastructure Project	Khonaini International	Ladder	Nov'11	M/S
144	Sadaf Jubail	Saad Al Othman	Ladder	Dec'11	M/S
145	Infrastructure Project Jubail	Saudi Tumpane/Azmeel	Ladder	Dec'11	M/S
146	Maaden - Arar Project	Weng Fu	Gratiing	Dec'11	M/S
147	Wastwater conveyor - Riyadh	Tumpane Jubar Joint Venture National Water Company	Handrail and Grating	Dec'11	M/S/I
148	Sewage Treatment Plant North Jeddah	Aziz Company	Handrail/grating Ladder	Jan'12	M/S
149	Sewage Treatment Plant - Bapco Bahrain	G. S. Engineering Co.	Grating, Handrail & Ladder	Jan'12	M/S
150	Power Station - Ras Alaffan - Qatar	Rezayat Co. - Qatar	Grating	Feb'12	M/S
151	Maaden Project, Ras Al Khair	Abdullah Al Khodari	Ladder	Feb'12	M/S
152	Sadara Project, Jubail	Sinopec	FRP Reebar	Feb'12	M/S
153	Sewage Treatment Plant - Bahrain	Mechanical Services Co. Ltd.	Handrail and Ladder	Feb'12	M/S
154	Sadara Project, Jubail	Mohd. Al Suwailem	FRP Reebar	Feb'12	M/S
155	Marafiq Project, Jubail	SETE	Ladder and Grating	Feb'12	M/S
156	Water Inlet Barrier - Bapco Bahrain	Bahrain Petroleum Co.	FRP SecurityBarrier	Mar'12	M/S
157	Desalination Plant - Jeddah	Al Zamil Metal Works	Grating, Handrail Ladder	Mar'12	M/S
158	Sadara Project, Jubail	Ahamad Ali Bin Ali	FRP Reebar	Mar'12	M/S
159	Sewage Treatment Plant Jeddah	Al Fanar	Handrail Grating Ladder	Apr'12	M/S
160	STP Ras Al Khair Project	Borim	Handrail	May'12	M/S
161	Chlorivinyl Project - Jubail	Boo Won Lee Const. Co.	Grating	Apr'12	M/S
162	Marafiq Project, Jubail	Nasser Al Hajri	Grating & Handrail	Jun'12	M/S
163	Jubail Infrastructure Project - RC	AlKhonaini International	Ladder	Jul'12	M/S
164	Desalinatoin Plant - Jeddah	Assad Saed For Const.	Grating/Handrail	Sept'12	M/S

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165	NWC Sewer Project Jeddah	Hyo Joung Const.	Handrail	Sept'12	M/S
166	Chlorvinyl Project Jubail	Daelim Co.	Grating/Handrail	Oct'12	M/S
167	Desalination Plant Marafiq Jubail	Al Fatah Water Co.	Grating/Handrail/Ladder	Nov'12	M/S
168	HQPB Energy Center Jeddah	Al Aman Co.	Grating	Nov'12	M/S
169	Ras Al Khair Project	Saudi Archirodon	Handrail/Ladder/Grating	Nov'12	M/S
170	STP Al haddad Project	Azis Co.	Handrail/grating/ladder	Nov'12	M/S
171	Desalination Plant Jeddah	Abu Jadayel	Grating/Handrail	Dec'12	M/S
172	Desalination Plant Jeddah	Doosan	Grating/Handrail/Ladder	Dec'12	M/S
173	RasAl Khair Power/Desal Plant	Assad Saeed For Const.	Handrail/Grating/Ladder	Jan'13	M/S
174	Sadara Project Jubail	A & Khalifa Co.	Grating/Handrail	Feb'13	M/S
175	Marafiq Yanbu	Earthech Co.	Grating/Handrail	Mar'13	M/S
176	Sewage Treatment Plant Taif	Systech	Handrail/Grating	Mar'13	M/S/I
177	Water Tank Project Qatif	Ministry of Agriculture	Grating Handrail/Ladder	Mar'13	M/S/I
178	Qurrayah Power Plant	Hassan Allam Const.(Samsung)	Grating & Curved Angle	Apr'13	M/S
179	Ras Al khair Project	Saudi Archirodon	Grating/Handrail/Ladder	Apr'13	M/S
180	King Abdullah University	Salem al Hareth	Grating &Checkered Plate	Apr'13	M/S
181	Desalination Plant Marafiq Jubail	Al Fatah Water Co.	Grating/Handrail/Staircase	May'13	M/S
182	RO Desalination Plant 3 - Jeddah	Doosan	Grating/Handrail/Ladder/stair tread	May'13	M/S
183	STP - Salbokh	Suido Kiko	Grating	May'13	M/S
184	JODP Phase 1 Infrastructure - Makkah	Nesma & Partners	Ladder and Ladder with safety cage	Jul'13	M/S
185	Power & Desalination Phase 1 Ras Al Khair	Assad Said	Gratings/ Profiles	Jul'13	M/S
186	Jabar Omar Development Proj - Makkah	Saudi Arabian Baytur	Ladder	Aug'13	M/S
187	Desalination Plant - Yanbu	SWCC	Gratings	Aug'13	M/S
188	Power Plant II - Rabigh	Kettaneh Construction	Handrails	Aug'13	M/S
189	Desalination Plant Marafiq Jubail	Al Fatah Water Co.	Grating/Handrail/Ladder/Platform	Aug'13	M/S
190	South Jeddah Pump Station	Abduljadayel Co. for Cont National Water Company	Grating	Aug'13	M/S
191	IWTP8 - Marafiq - Jubail	SETE	Gratings/Platform/Profiles	Aug'13	M/S
192	STP - Al Hayer	Aziz Co National Water Company	Gratings/Profiles	Sep'13	M/S
193	Expansion of Jubail 2 Product Pipeline	Azmeel Tumpane	FRP Reebars	Sep'13	M/S
194	Sadara Project Jubail	A & Khalifa Co.	Ladder/ Ladder with safety cage	Sep'13	M/S
195	Marafiq - Yanbu	Technical Contracting Comp	Gratings	Oct'13	M/S
196	Shedgum - Saudi Aramco	Veolia Water	Gratings/Handrails	Nov'13	M/S

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197	Independent Power Plant - Qurrayah	Samsung C & T	Handrails	Dec'13	M/S
198	Circle Power Plant - Shoaiba II	Saudi Archirodon	Gratings	Dec'13	M/S
199	Power Plant II - Rabigh	Kettaneh Construction	Handrails	Dec'13	M/S
200	O&M NPOC,Dharan- Saudi Aramco	Al Yamama Company	Gratings/Handrail/Platform	Jan'14	M/S
201	Site Dev of Area "B" stage1- Ras Al Khair	Mofarreh Marzouq Al Harbi	FRP Reebars	Jan'14	M/S
202	Central Utility Comp - Haram Exp Proj	Saudi Bin Ladin Group	Ladders/ Ladders with Safety cage	Jan'14	M/S
203	Strategic reservoir- Briman Jeddah	Al Muhaidib Contracting	Grating/Handrail/Ladder/Platform	Jan'14	M/S
204	Khumra Project	Hassan Abdulkader AlFadl Comm. Serv. Co. Ltd	Gratings/Handrail/Ladder/Platforms	Feb'14	M/S
205	SADARA Chem-1 Project, Jubail	Nasser S. Al-Hajri Corporation	Molded Gratings	Feb'14	M/S/I
206	Desalination Plant Marafiq Jubail	Al Fatah Water Co.	Grating/Handrail/Ladder/Platform	Mar'14	M/S
207	Water & Power Projects	Water & Power Projects	Handrails system	Mar'14	M/S
208	Ras Al Khair Desalination Project	Assad Said for Contracting	Gratings/Ladder with safety cage	Mar'14	M/S
209	Saudi Qurrayah IPP	Samsung C & T	Handrail system	Mar'14	M/S
210	KAIA Jeddah Airport	Hamon Cooling Tower	Ladder with safety cage/ Platform	Apr'14	M/S
211	SAMAPCO Plant	Mechanical Services Co. Ltd. Petrochemicals Company	Gratings	Apr'14	M/S
212	Rabigh Power Plant II	Kettaneh Construction	Handrails system	Apr'14	M/S
213	HARAM Expansion Project	Saudi Bin Landin Group	Molded Gratings	Apr'14	M/S
214	Ras Al Khair Project	Al Harbi Trading & Cont Co	FRP Reebars	Apr'14	M/S
215	Water Tank Project Qatif	Ministry of Agriculture	Grating Handrail/Ladder	Apr'14	M/S
216	Sadara Project Jubail	A & Khalifa Co.	Grating/Handrail	Apr'14	M/S
217	RCJ Bufferzone Projects	Al Shalawi Intl Holding Co	Ladders	Apr'14	M/S
218	Sadara Project Jubail	A & Khalifa Co.	Grating/Handrail	May'14	M/S
219	Fish Hachery Project - Ras Abu Ali	Al Hammam Company	Grating with checkered plate/ Profiles	May'14	M/S
220	Ras Al Khair Project	Nesma Trading Company	Ladder with safety cage	May'14	M/S
221	Al Khumrah Project	Abuljadayel Co	Grating with checkered plate	May'14	M/S
222	HARAM Expansion Project	Saudi Bin Landin Group	Molded Gratings	May'14	M/S
223	Jalmuda Jubail Project (716-C02R)	Azmeel Contracting	Ladders	Jun'14	M/S
224	Desalination Plant Marafiq Jubail	Al Fatah Water Co.	Grating/Handrail/Ladder/Platform	Jun'14	M/S
225	ARCC Rabigh IWSPP Project	Al Rushaid Construction Co Ltd	FRP Sheet Cover system	Jun'14	M/S
226	Egypt Project	Mahmood Saeed Beverage Cans & End Industry Co Ltd	Molded Gratings	Jun'14	M/S
227	Al Mataf Project - Makkah	Saudi Bin Landin Group	Gratings/ Platforms/ Handrails/	Jun'14	M/S
228	SWC, Royal Commission - Jubail	China Communications Const Company Ltd	Gratings/ Checkered plate cover Ladders/ Ladder with safety cage	Jul'14	M/S

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229	Saudi National Guards - Housing Projects	AXAL Arabia Construction	Ladders	Jul'14	M/S
230	Sadara Project Jubail	A & Khalifa Co.	Ladders	Jul'14	M/S
231	KAIA Project	Consolidated Contractors Co.	Gratings	Jul'14	M/S
232	Yanbu 3	Sungbo C&E Co. Ltd	Molded gratings	Jul'14	M/S
233	KAIA Project	Consolidated Contractors Co.	Ladders	Aug'14	M/S
234	STP - Al Khumrah 3 Project	Abuljadayel Co.	Gratings/ Handrails	Aug'14	M/S
235	Haram Expansion Project	Saudi Bin Landin Group	Gratings	Aug'14	M/SI
236	Sadara Project Jubail	A & Khalifa Co.	Gratings	Sep'14	M/S
237	Desalination Plant Marafiq Jubail	Al Fatah Water Co.	Grating/Handrail/Ladder/Platform	Sep'14	M/S
238	SADARA SWRO SIDEM project	KCC Kil Jin Kang	Gratings	Oct'14	M/S
239	SADARA SWRO Desalination Plant Proj	Saudi Friends Engr & Const	Gratings/ Profiles	Oct'14	M/S
240	South Jeddah Project	Abuljadayel Co.	Molded Grating/ Checkered Plate	Oct'14	M/S
241	Yanbu Ph3 - Package "D" PJT	SAMBO Saudi Arabia SWCC Yanbu	FRP Covers/ Profiles	Dec'14	M/S
242	Ras Al Khair	Al Jazea Cont & Trading Royal Commission	Gratings/Ladder/ Handrail/Checkered Plate	Dec'14	M/S
243	Jubail Home Ownership Project	Al Shalawi Int'l Holding Co Royal Commission	Ladders/ Profiles	Dec'14	M/S
244	RO Plant Phase III - Jeddah	Al Fanar Co. SWCC Jeddah	FRP Corrugated Sheets	Dec'14	M/S
245	Strategic Reservoir - Briman Jeddah	Al Muhaidib Contracting National Water Company	Ladder/ Platform/ Molded Grating	Dec'14	M/S
246	P&C Sea Water Pump Station (RC 201-C01)	Faisal Electro Mechanical Co Royal Commission	Gratings/ Ladder/ Handrails	Dec'14	M/S
247	National Water Company, Riyadh	Dar Al Riyadh National Water Company	Gratings/ Ladders/ Profiles	Jan'15	M/S
248	Mutrafiah Projects	Mohammed A. Al Swailem Co	Ladders	Jan'15	M/S
249	Haram Expansion Project	Saudi Bin Ladin Group Ministry of Finance	Ladders	Jan'15	M/S
250	Rabigh Projects	Al Ta'Afuf Company National Water Company	Gratings/ Ladder with safety cage Platform/ Handrails/ Profiles	Feb'15	M/S
251	Desalination Plant - Jubail	Saline Water Conversion Corp SWCC Jubail	Gratings	Feb'15	M/S
252	Yanbu Power Plant	Technical Contracting Co Marafiq Yanbu	Handrails/ Profiles	Feb'15	M/S

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253	Al Mataf Project - Makkah	Saudi Binladin Group	Pultruded Gratings	Mar'15	253
254	King Abdulaziz Int'l Airport Project	Consolidated Cont Co	Ladder	Mar'15	254
255	Khumrah 3, Jeddah Project	Abuljadayel Co	Pultruded Gratings/ Handrails	Mar'15	255
256	Jamal Omar Dev't Project, Makkah	Drake & Scull Const KSA	Ladder/ Platforms	Mar'15	256
257	STP Al Hayer Project	Aziz Company	Molded Gratings/ Profiles	Apr'15	257
258	Jeddah South Thermal Power Plant	Saudi Archirodon LTD	Pultruded Gratings/ Handrails/ L	Apr'15	258
259	Desalination Plant Marafiq Jubail	Al Fatah Water Co.	Pultruded Gratings/ Handrails/S	Apr'15	259
			Structural Support		
260	Haram Expansion Project - Makkah	Saudi Binladin Group	Pultruded & Molded Gratings/La	Apr'15	260
261	Marafiq Housing Project - Jubail	Al Latifia Trading	Ladder	Apr'15	M/S
262	North Park Al-Midra, Aramco Project	Al Yamama Company	Checkered Plate/ Platforms	May'15	M/S
263	Shaybah RIC Expansion Project- Aram	Mohammad Al Mojil Group	Grating/ Staircase/ Handrail/ La	May'15	M/S
			Checkered Plate/ Structural Support		
264	Jamal Omar Dev't Project Ph4, Makkah	Ruwal Civil Construction	Ladder with safety cage/ Platfor	May'15	M/S
265	King Abdulaziz Int'l Airport Project	Golden Advance Company	Molded Grating/ Handrail/ Ladd	May'15	M/S
			Staircase/ Structural Support		
266	Jamal Omar Dev't Project Ph2, Makkah	Saudi Arabian Baytur	Ladder	May'15	M/S
267	Defence Project, RC Jubail	Al Kifah Contracting	Ladder	May'15	M/S
268	Yanbu Desalination Plant	Saline Water Conversion Cor	Handrail/ Corrugated Sheets	Jun'15	M/S
269	Sabkha Sump Pump Project	Al Hassa Irrigation & Drainag	Pultruded Gratings	Jun'15	M/S
		Authority			

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270	SWCSR works Project - Ras Al Khair	PCMC	Gratings/ Handrail/ Ladder	Jun'15	M/S
		Royal Commission			
271	SWCC Yanbu Ph3	SAMBO Arabia Cont Co.	Pultruded Grating/ Handrail/ Prc	Jun'15	M/S
			Ladder		
272	Seawater Cooling System R.C.S.D Proj	Khonaini International Co	Ladder	Jul'15	M/S
273	Independent Power Plant - Rabigh 2	Kettaneh Construction	Pultruded Grating/ Handrail/Lad	Aug'15	M/S
274	Saudi Elastomers Project	Daelim Saudi Arabia	FRP Sunshades	Aug'15	M/S
275	King Abdulaziz Int'l Airport Project	ORASCOM KSA	Ladder with Safety Cage	Aug'15	M/S
276	Fish Hachery Project, Ras Abu Ali	Al Hammam Company	Curb Angle	Aug'15	M/S
277	Mardumah Project Ph2	China Harbour Engineering	Ladder	Sep'15	M/S
278	Ma'aden Amonia Plant Proj, Ras Al Kha	Gulf Asia Contracting Co	Pultruded Grating/ Handrail/ Lad	Sep'15	M/S
279	King Abdulaziz Int'l Airport Project	Vision Network Company	Ladder with Safety Cage	Sep'15	M/S
280	Faisaliya Jeddah Project	DNGO Contracting Saudi Co	Walkthru/Platform/Ladder w/saf	Oct'15	M/S
281	North Jeddah Project	Abuljadayel Co	Molded Grating	Oct'15	M/S
282	Madina Hajj City package 1	Al Fouzan Trading	Molded Grating/ Ladder w/safet	Nov'15	M/S
283	SWCC Yanbu Ph3	Samsung Engineering Co Lt	Profiles	Nov'15	M/S
284	JIZEN Project	Veolia Water Solutions	Molded Grating	Dec'15	M/S
285	Dhurma Power Plant Project	Assad Said Corp	Ladder	Dec'15	M/S
286	IWPP Shuaibah Project	QRY Constrcution Co Ltd	Pultruded Grating/ Handrail/ Sta	Dec'15	M/S

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287	RC - P&C Sea Water Pump Stations	FEMCO	Profiles	Dec'15	M/S
288	RC - Defence Project, Jubail	Al Kifah Contracting	Ladder	Jan'16	M/S
289	Eastern Region STP	Water & Power Projects Con	Molded Gratings/ Covers	Jan'16	M/S
290	Jeddah South Thermal Power Plant	Saudi Archirodon LTD	Pultruded Grating	Jan'16	M/S
291	SWCC Yanbu Ph3	SUNGBO C & E Co. Ltd	Grating/ Ladder w/safety cage/	Jan'16	M/S
			Checkered Plate/ Cover		
292	Madina Hajj City package 2	Al Fouzan Trading	Ladder w/safety cage	Jan'16	M/S
293	SWCC Yanbu Ph3	SAMBO Arabia Cont Co.	Handrail/ Walkthru	Jan'16	M/S
294	RC - Site Devt of Downstream Ph1	Khonaini Intl	Pultruded Grating/Handrail/ Plat	Jan'16	M/S
295	Mainline of sewage, Jeddah	Al Yamama Company	Ladder w/safety cage/ Handrail/	Feb'16	M/S
296	Sabic Infrastructure	Azmeel Contracting Compan	Ladder	Feb'16	M/S
297	Hyundai - Shuqaiq Power Plant	Huta Marine Works Ltd	Handrail/ Ladder w/safety cage	Feb'16	M/S
298	SWCC Yanbu Ph3	Attken Steel Engineering	Pultruded Grating	Feb'16	M/S
299	Infra of Jubail 2, Stage 2 (SWC)	China Communications	Pultruded & Molded Grating/ Pla	Feb'16	M/S
300	SABIC Mutrafiah Project	Saudi Kier Construction Ltd	Ladder	Feb'16	M/S
301	Shuqaiq Steam Power Plant	Saudi Conreco/Saudi Archirc	Ladder with Safety Cage	Feb'16	M/S
302	SADARA Project	Nasser Al Hajri	Profiles	Feb'16	M/S
303	STP North Jeddah Airport	Ahmad A. Alkadi Col Ltd	Handrail	Mar'16	M/S
304	Gov't Agencies Compound (MOF) Riya	Al Fouzan Trading	Access Ladder with safety cage	Mar'16	M/S

S. No.	Project Title	Client Name/ End User	Scope of Work/Specification	Year of Supply	Role in Supply
305	RC - P&C Sea Water Pump Stations	FEMCO	Stair Tread/Pultruded Gratings/	Mar'16	M/S
306	Jamal Omar Dev't Project Ph2, Makkah	Saudi Arabian Baytur	Molded Grating/ Platform/ Hand	Mar'16	M/S
			Ladder w/safety cage		
307	Dhurma Power Plant Project	Assad Said Corp	Ladder	Apr'16	M/S
308	Water Jeddah Project	Al Manar Arabian Corp	Platform/ Handrail/ Ladder	Apr'16	M/S
			w/safety cage		
309	Yanbu Ph3, Desalination Plant	Doosan Heavy Industries	Handrail	May'16	M/S
310	Oman	Amiantit	Profiles	Jun'16	M/S
311	RC Project - Ras Al Khair	Azmeel Contracting Compan	Ladder/ Ladder Steps	Jun'16	M/S
312	SWCC Yanbu	Support Lines	Pultruded & Molded Grating/Pla	Jun'16	M/S/I
			Covers, Integrated system		
313	MEP Construction of Apartment	Azmeel Contracting Compan	Ladder	Jun'16	M/S
314	SWCC Yanbu Power Plant Ph3	Samsung Engineering	Ladder	Jul'16	M/S
315	Water Park Utilities	China Harbour Engineering	FRP Rebars	Jul'16	M/S
316	SWRO Ph2, Marafiq	Salem Al Salem	Pultruded Gratings, Handrails, Sheet	Aug'16	M/S
			Covers, Ladders w/ Safety Cage		
317	Saudi ARAMCO Proj	OGASCO	Molded Grating	Aug'16	M/S
		Saudi Aramco			
318	National Guard Family Compound	Azmeel Contracting Compan	Gratings & Ladders	Aug'16	M/S
319	Jeddah Airport Proj.	AlKawther Industries	Gratings and Plates	Aug'16	M/S

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320	Utility Bldg. RC C02 Jubail	Alkifah Contracting	Ladders	Oct'16	M/S
321	Shuquaiq Steam Power Plant Project	Al Fanar Bena	Gratings	Oct'16	M/S
322	SWCC Shuquaiq Plant	Kabbani Construction Grp	Gratings and Ladders	Nov'16	M/S
323	Al Khafji SWRO Plant	Salem Al Salem	Pultruded Gratings and Cabble	Nov'16	M/S
324	Baggage Spiral Chute@ KAIA Jeddah	Saudi Binladin Group	GRP Baggage Chute	Nov'16	M/S
325	KNPC-Al Zour Refinery-Kuwait Proj	Arabian Int`l Co.	Grating, Handrails and Platform	Nov`16	M/S
326	RCSD Proj. 137-C03	Khonaini Int'l Company	Ladders and Platforms	Dec'16	M/S
327	SWCC Yanbu	Ahmed H. Al Khanjaf Est.	Molded Gratings and Handrails	Dec'16	M/S
328	Al Khafji SWRO Plant	Saudi Binladin Group	Pultruded Gratings, Cabble ladd and Handrails	Jan'17	M/S
329	Jubail SWRO Plant	Rawafid Int'l	Profiles	Jan'17	M/S
330	Replace Wireless System - Various company facilities Project	Ather Trading Est. Saudi Aramco	Profiles	Feb'17	M/S
331	PP13-Dhurma	Assad Said	Ladders	Feb'17	M/S
332	National Guard Family Compound	Azmeel Contracting Compan	Fiber Glass Cabinet	Feb'17	M/S
333	RC Project`s Valve Chamber	Khonaini International	Installation of supplied FRP Pla with structural supports	Feb'17	I
334	RC Cont. No.137-C03	Khonaini International	FRP Pipe Support	Feb'17	M/S
335	Al Faisaliyah	Abuljadayel Co.	GRP Sheets	Apr'17	M/S
336	Modon Project	Abdullah Ahmad Aldossary	FRP Pultruded Ladder	Apr'17	M/S

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337	Dammam North Housing Project	MAPA Construction	FRP/GRP Integrated System and Structural Supports	Apr'17	M/S/E
338	1028 Riyadh Park	Al-Aman Company	FRP Molded Grating	Apr'17	M/S
339	HH - R C JUBAIL - DREDGING WORKS	Huta Marine	FRP Ladder	May'17	M/S
340	Operation and Maintenance	Saudi Binladin Group	FRP Pultruded Grating	May'17	M/S/E
341	Al Khafji SWRO Plant	Advanced Water Technology	GRP Pultruded Gratings w/ sup and GRP Handrails	Jun'17	M/S/E
342	Yanbu Power & Desalination Plant PH-3	SEPCO III	FRP Pultruded Gratings w/ supp and FRP Handrails	Jul'17	M/S/E
343	ARAMCO Project	Al Yamama Company	FRP Handrail,GRP Ladders w/ C FRP Gratings and Checkered plates	Jul'17	M/S/E/I
344	P&C of Southern Drainage Outfall @ RI	NEES Trading and Contracti	FRP Rebar	Aug'17	M/S
345	Fadhili Power Plant	Kettaneh Construction	GRP Pultruded Grating and GRP Ladder Rung	Aug'17	M/S/E
346	Mangrove Ecopark in Rahima	SHADE Corp.	GRP Handrails	Sep'17	M/S/E
347	Processing Plant Receiving Area Trenc	National Aquaculture Group	FRP Heavy Duty Grating	Nov'17	M/S
348	Scope Line 3,ANM-Riyadh Metro Proj.	Tazez Advanced Industrial	FRP Integrated System	Nov'17	M/S/E
349	133-Aramco Package 2	Al Yamama Company	FRP Handrail and FRP Grating	Jan'18	M/S/E
350	Jeddah Economic City	Al Fouzan Trading	GRP Ladder with Safety Cage	Mar'18	M/S/E
351	Jazan Integrated Gasification Combine Cycle	China Harbour Engineering	FRP Ladders, Grating, Handrail Staircase	Apr'18	M/S/E

S. No.	Project Title	Client Name/ End User	Scope of Work/Specification	Year of Supply	Role in Supply
352	Shoaiba MED Exp.II	Sasakura Middle East Co.	FRP Handrail and Ladder	Apr'18	M/S/E
			with Safety Cage and walkthru		
353	Project Emergency Response Complex	China Railway 18th Bureau	FRP Ladder, Handrail and Platfo	Apr'18	M/S/E
	(JEC)				
354	Infrastructure Sabic Al-Mutrafiah	Azmeel Contracting Compan	FRP Ladder	Apr'18	M/S/E

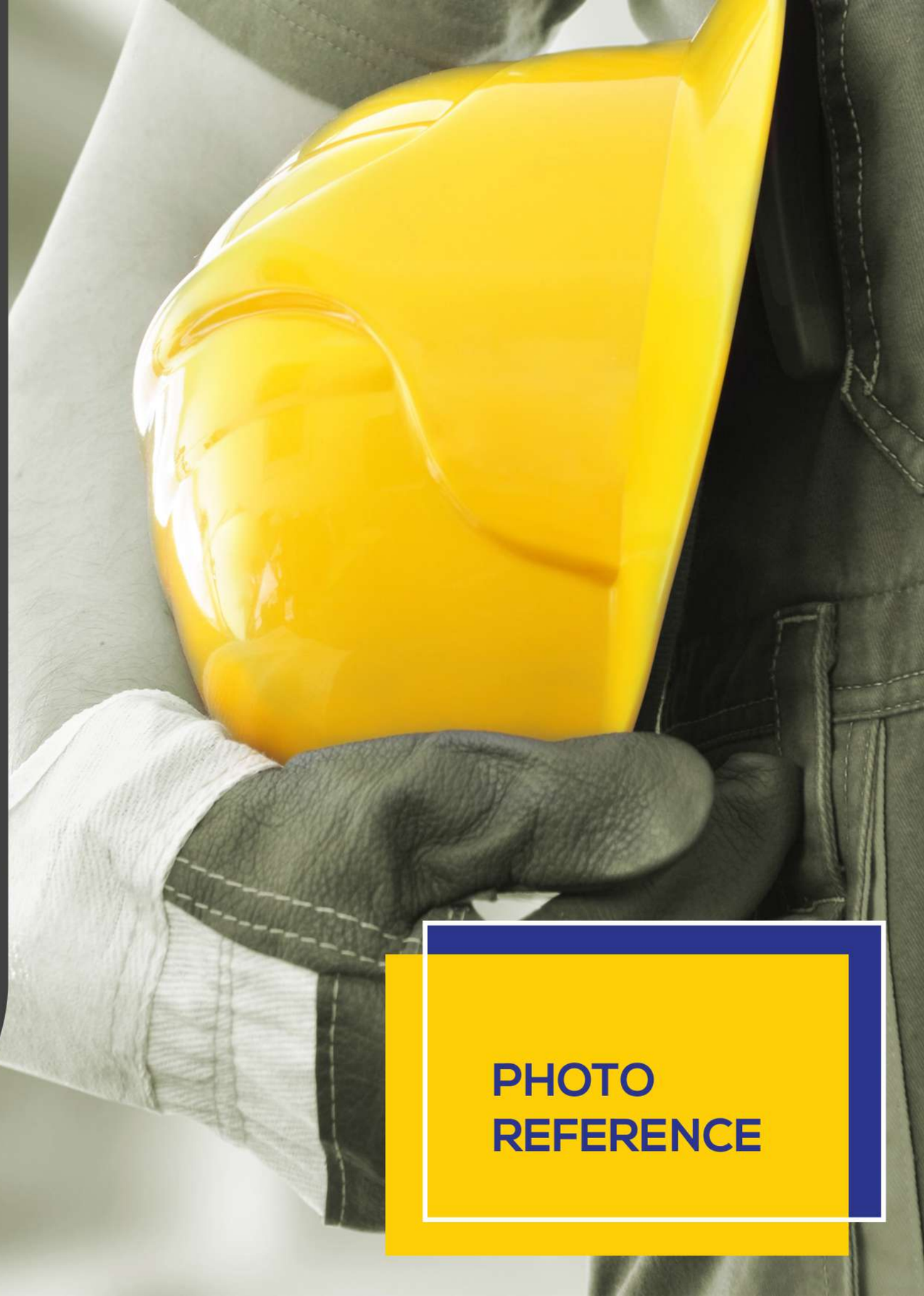
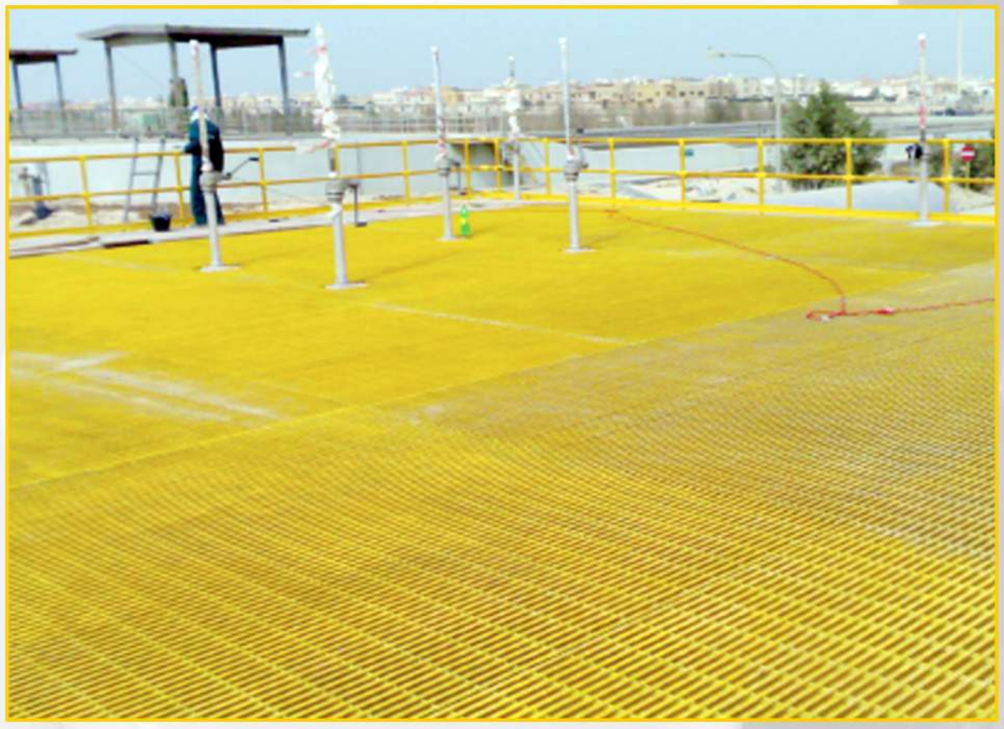
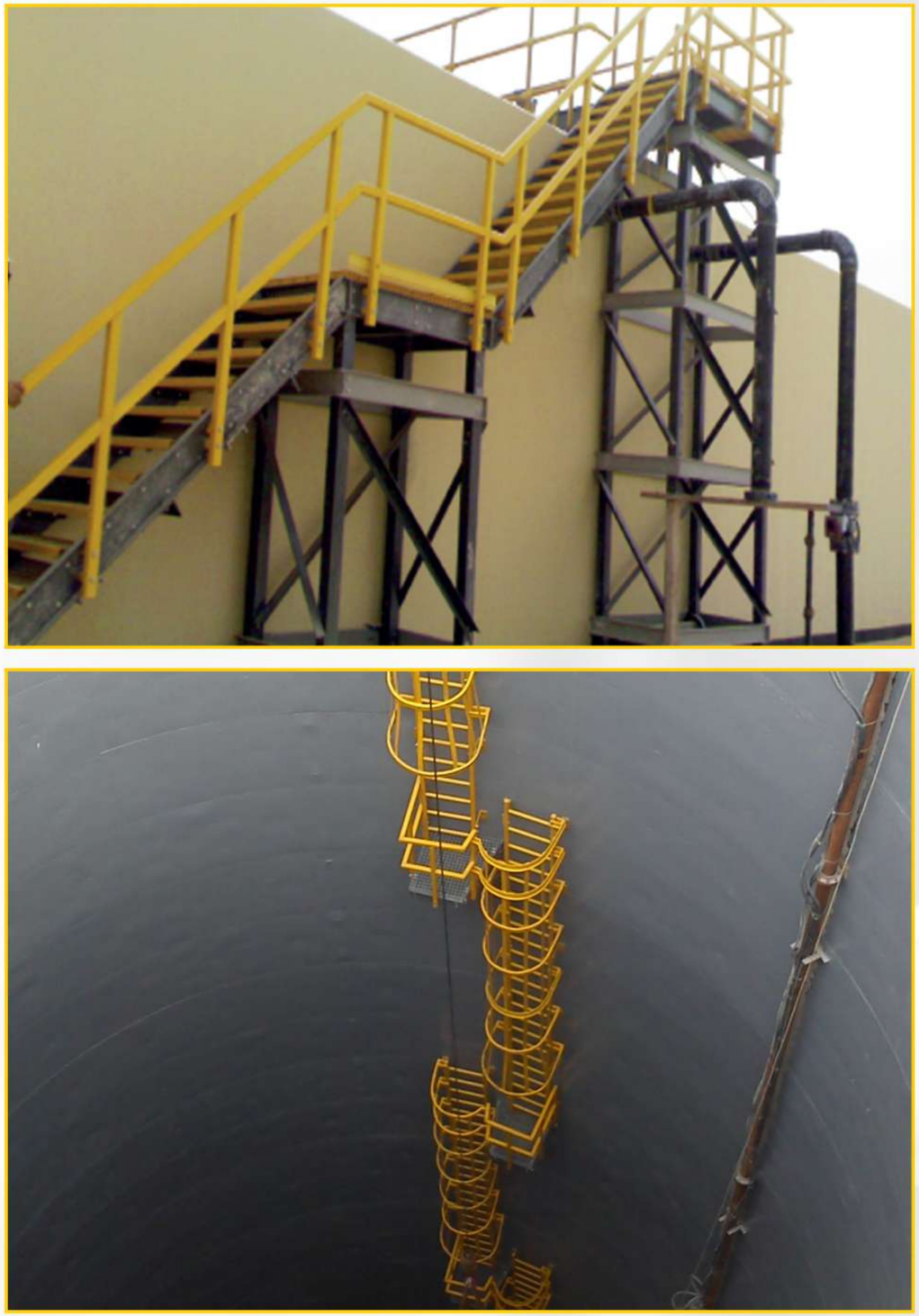


PHOTO REFERENCE






AWATER SUPPLY