INSPECTION & TEST PLAN (ITP)

Plot 22A MW5 , Mussafah
P.O. Box 70362
Abu Dhabi,
U.A.E
Tel No: 02 5552426
Fax No: 02 5541384
Email: industries@ametecs.com

Title : ITP for 3.25 m3 surge vessels

ITP No. : AMT/ITP/SV/RWPS/AM260103/01

Rev. : 0

Project	North Yas, Phase 2 – Yas Living
Client	ALDAR
Consultant	ARCADIS CONSULTING MIDDLE EAST LIMITED
Main Contractor	FIBREX CONTRACTING GROUP
MEP Contractor	Avanti Contracting LLC
Manufacturer	AMETECS

"W" - WITNESS	A point beyond which work may proceed without formal documented approval by Client/Contractor/Consultant
	"W" points shall be notified in accordance with the purchase order
"H" - HOLD POINT	A point beyond which work shall not proceed without formal documented approval by Client/Contractor/Consultant
	"H" points shall be notified in accordance with the purchase order
"R" - RECORD REVIEW	The document are to be reviewed by Client/Contractor/Consultant as required and signed as such.

REMARKS:

1. Contract shall prevail in case of any conflict between Contract and any other document addressed herewith including this QCP/ITP.
2. Client/Contractor/Consultant shall have the right to attend any of the activities as witness. For this purpose Client/Contractor/Consultant shall be informed before hand over of the activities planned date as per the Contract requirement.
3. This QCP/ITP shall be considered approved once signed and stamped by all responsible parties

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OP No.	Activity Description	Controlling Procedure Document	Acceptance Criteria	Responsible Person	Records	AMETECS	AVANTI	FIBREX	ARCADIS	ALDAR
0	**Inspection and Test Plan**	Purchase Order requirements	As per client requirements	EM	Signed ITP	H	H	H	H	**H**
1	**Design Engineering**									
1.1	Vessel volumne & orientation as per surge vessel	Approved surge analysis	TAQA-D criteria	DE	Approved surge analysis	H	H	H	H	H
1.2	Datasheet and drawing for vessel	As per inquiry details	ASME Sec VIII Div. 1	DE	Submittal	H	H	H	H	R
2	**Material Handling**									
2.1	Material Requisition	Design drawing / BOQ	ASME Sec II Part A/B/C	DE/EM	Purch. Requisition	H	-	-	-	-
2.2	Material receipt	Purchase Spec./Purchase Requisition	ASME Sec II Part A/B/C	Foreman	Signed Delivery note	H	-	-	-	-
2.3	Material Verification	AMETECS PO/Drawing	ASME Sec II Part A/B/C	QCE	Material Receipt Insp.Rep. (MIR)	H	R	R	-	-
2.4	Material Storage	Section 6 of QCM	ASME Sec II Part A/B/C	Fabrication Engr.	Material Receipt Insp.Rep. (MIR)	H	R	R	-	-
2.5	Consumables storage	Manufacturer's specifications	Manufacturer's specifications	Foreman	Consumables inventory	H	-	-	-	-
3	**Welding**									
3.1	WPS and PQR	Section 8 of QCM	ASME Sec IX/Sec VIII Div 1	QCE	WPS, PQR	H	R	R	R	R
3.1.1	Test coupon welding and testing	ASME Section IX	ASME Sec IX/Sec VIII Div 1	Fabrication Engr.	Variables sheet of PQR	H	R	R	-	-
3.1.2	Laboratory Testing	ASME Section IX	ASME Sec IX/Sec VIII Div 1	Fabrication Engr.	Laboratory test reports	H	R	R	-	-
3.1.3	PQR Documentation	ASME Section IX	ASME Sec IX/Sec VIII Div 1	Fabrication Engr.	Approved PQR	H	R	R	R	-
3.2	Welder qualification	Section 8 of QCM	ASME Section IX	Fabrication Engr.	WPQ & List of Qualified Welders	H	R	R	R	-
3.3	Welding consumables	Section 6, 8 of QCM	ASME Section IX	Foreman	Consumables inventory	H	-	-	-	-

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4	**Fabrication**									
4.1	Transfer of markings, followed by cutting of material	Section 6 of QCM/Fabrication drawing	ASME Sec VIII Div. 1	Fabrication Engr./QCE	Fabrication Inspection Report	H	R	R	-	-
4.2	Shell & dished heads inspection after rolling/forming	Fabrication drawing	ASME Sec VIII Div. 1	Fabrication Engr./QCE	Fabrication Inspection Report	H	R	R	-	-
4.3	Shell long seam fit-up & welding	WPS, Weld Map	ASME Sec VIII Div. 1	QCE	Fabrication Inspection Report	H	R	R	-	-
4.4	Dished heads fit-up & welding	WPS, Weld Map	ASME Sec VIII Div. 1	QCE	Fabrication Inspection Report	H	R	R	-	-
4.5	Marking/cutting of openings on dished heads	WPS, Weld Map	ASME Sec VIII Div. 1	QCE	Fabrication Inspection Report	H	R	R	-	-
4.6	100% RT of vessel long & circ seams	WPS, Weld Map	ASME Sec VIII Div. 1/Sec V	QCE	NDT Reports	H	R	R	R	-
4.7	Fit-up & welding of studded outlets to dished heads	WPS, Weld Map	ASME Sec VIII Div. 1	QCE	Fabrication Inspection Report	H	R	R	-	-
4.8	Fit-up & welding of manway nozzles to vessel	WPS, Weld Map	ASME Sec VIII Div. 1	QCE	Fabrication Inspection Report	H	R	R	-	-
4.9	Fit-up & welding of drain & level indicator nozzles to inlet nozzle	WPS, Weld Map	ASME Sec VIII Div. 1	QCE	Fabrication Inspection Report	H	R	R	-	-
4.10	Fit-up & welding of PSV nozzle	WPS, Weld Map	ASME Sec VIII Div. 1	QCE	Fabrication Inspection Report	H	R	R	-	-
4.11	Fit-up & welding of pressure gauge, level indicator nozzles	WPS, Weld Map	ASME Sec VIII Div. 1	QCE	Fabrication Inspection Report	H	R	R	-	-
4.12	Fit-up & welding of lifting lugs	WPS, Weld Map	ASME Sec VIII Div. 1	QCE	Fabrication Inspection Report	H	R	R	-	-
4.13	Fit-up & welding of vessel leg supports	WPS, Weld Map	ASME Sec VIII Div. 1	QCE	Fabrication Inspection Report	H	R	R	-	-
4.14	Fit-up & welding of name plate bracket and other non-pressure parts	WPS, Weld Map	ASME Sec VIII Div. 1	QCE	Fabrication Inspection Report	H	R	R	-	-
4.15	MPI of all fillet welds	WPS, Weld Map	ASME Sec VIII Div. 1/Sec V	QCE	NDT Reports	H	R	R	R	-
4.16	Final visual and dimension check	Fabrication drawing	ASME Sec VIII Div. 1	Fabrication Engr.	Final Dimension Inspection Report	H	R	R	R	R
5	**Hydrostatic test of vessels**	Hydro test procedure	ASME Sec VIII Div. 1	QCE	Hydro Test Report	H	H	H	W	W

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6	**Vessel painting - Internal**									
6.1	Grit blasting	To SA 2.5	ISO 8501-1 (near white metal finish)	QCE	Painting Report	H	R	R	R	R
6.2	Paint application	Two coats of phenolic epoxy (175 mic. Each)	No porosity, sagging, cracking, blistering, etc)	QCE	Painting Report	H	R	R	R	R
6.3	DFT check after painting	Total min. DFT of 350 mic.	Min. DFT has to be achieved at all areas	QCE	Painting Report	H	W	W	W	R
7	**Vessel painting - External**									
7.1	Grit blasting	To SA 2.5	ISO 8501-1 (near white metal finish)	QCE	Painting Report	H	R	R	R	R
7.2	Primer coat	Zinc rich epoxy primer - 1 coat (DFT of 75 mic.)	No porosity, sagging, cracking, blistering, etc)	QCE	Painting Report	H	R	R	R	R
7.3	Intermediate coat	High build polyamide epoxy, 1 coat (DFT of 40 mic.)	No porosity, sagging, cracking, blistering, etc)	QCE	Painting Report	H	R	R	R	R
7.4	Intermediate coat	High build polyamide epoxy, 1 coats (DFT of 135 mic.)	No porosity, sagging, cracking, blistering, etc)	QCE	Painting Report	H	R	R	R	R
7.5	Top coat (RAL TBC)	Polyurethane gloss, 1 coat (DFT of 75 mic.)	No porosity, sagging, cracking, blistering, etc)	QCE	Painting Report	H	R	R	R	R
7.6	DFT check after painting	Total min. DFT of 325 mic.	Min. DFT has to be achieved at all areas	QCE	Painting Report	H	W	W	W	R
8	**Final documentation**									
8.1	Weld Inspection report	-	ASME Sec VIII Div 1	QCE	Weld Inspection Report	H	R	R	R	-
8.2	Pressure test report	-	ASME Sec VIII Div 1	QCE	Pressure Test Report	H	R	R	R	-
8.3	Material summary/traceability record	-	ASME Sec VIII Div 1	QCE	Matl. Summary Record	H	R	R	R	-
8.4	NDT reports	-	ASME Sec VIII Div 1	QCE	NDT Reports	H	R	R	R	-
8.5	As-built drawing	-	ASME Sec VIII Div 1	QCE	As-built drawing	H	R	R	R	R
9	**Packaging/transportation**									
9.1	Bladder installation in vessel	As per Bladder manufacturer guidelines	Bladder properly positioned in mounting flange	Fabrication Supervisor	O&M Manual	H	R	R	-	-
9.2	Delivery note	As per AMETECS delivery note	Client requirements	Fabrication Supervisor	Delivery note	H	H	R	-	-