

GP-QM-7.3-10 R0

<b>GRAND PRIX ENGG. PVT. LTD. FARIDABAD, INDIA</b>		<b><u>QUALITY ASSURANCE PLAN</u></b>		<b>QAP No.:</b>
<b>Client:</b>		<b>Inspection Authority:</b> AI (LR Insurance Inc.)		<b>Date:</b> 15.11.2008
<b>Project:</b>		<b>Drg. Nos.:</b> 2 - GP-1121 -1768, Rev.1		<b>Item No.:</b> 99-D-20
<b>P.O. No.:</b>		<b>Item :</b> FEED COALESCER		<b>Job No.:</b> GP-1121

<p><b>Item:</b> FEED COALESCER</p> <p><b>Quantity:</b> 01 No.</p> <p><b>ABBREVIATIONS</b>  GP - Grand Prix  AI - Authorized Inspector  QC - Grand Prix Quality Control Engineer  MTC - Material Test Report or Certificate of complince</p> <p><b>LEGEND</b>  <b>H (HOLD):</b> Stage of Inspection beyond which work shall not progress unless accepted by QC/AI.  <b>W (WITNESS):</b> Stage of Inspection for which AI shall be notified in advance, However work may proceed with AI's consent if AI is unable to undertake the inspection.  <b>R (REVIEW):</b> QC to perform the activity, document all results and offer to AI for review.</p>	<p><b>Code of Construction:</b> ASME SEC. VIII, DIV.1, EDITION 2007</p> <p><b>REFERENCE DOCUMENTS / PROCEDURES</b>  ASME Section VIII Division 1, Edition 2007  ASME Section V, Edition 2007  ASME Section IX, Edition 2007  ASME Section II Part A, Edition 2007  ASME Section II Part C, Edition 2007</p> <p>GP-QCP-01-R8 : Procedure for Radiographic Examination.  GP-QCP-02-R8 :Procedure for Liquid Penetrant Examination.  GP-QCP-05-R3 :Procedure for Hydrostatic test.  GP-QCP-06-R2 :Procedure for Heat Treatment.  GP-WP-01-R3 :Written Practice for Training, Qualification and Certification of NDT Personnel.</p>
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Rev.	Date	Description of Revision	Prepared By	Approved By	Reviewed & Accepted By:
0	15.11.2008	First Issue	SY	RS	Authorized Inspector

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S.No.	Operations	Characteristics	Extent	Reference Documents	Acceptance Standard	Format of record	Responsibility		
							GP	AI	
01	Drawing & Design Calculations	Review of Drawing & Design calculation	100%	ASME Section VIII Division 1	ASME Section VIII Division 1	Drawing & Design Calculations	H	R	
02	QA Plan	Hold/ Witness/Review stages	100%	Drawings and ASME Section VIII Division 1	ASME Section VIII Division 1	QAP	H	H	
03	NDE Procedure (PT & RT) and NDE Personnel Qualification	Review of Procedures / Personnel Records	100%	GP-QCP-01& GP-QCP-02	ASME Section VIII Division 1	Procedure / Inspection Process Checklist	R	R	
04	Procedures for Hydrostatic test and Heat treatment	Review of procedures	100%	GP-QCP-05 & GP-QCP-06	ASME Section VIII Division 1	Procedure / Inspection Process Checklist	R	R	
05	Weld Plan with WPS and PQR	Review of Weld Plan with WPS and PQR for production, repair & tack welds	100%	ASME Section VIII Division 1 & Section IX	ASME Section VIII Division 1 & Section IX	Weld Plan	H	R	
06	Welder Performance Qualification Records	Production, Repair & Tack Welding	100%	ASME Section VIII Division 1 & Section IX	ASME Section VIII Division 1 & Section IX	WPQ / WOPQ Records	H	R	
Prepared By: Subhash Yadav (Q.C Engineer )						Approved By: Rajiv Sharma (Head Quality)		Reviewed and Accepted By: (Authorized Inspector)	

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<b>Identification of Material for Pressure Parts</b>									
07	A. Plates & Pipes	MTC Review, Dimension Check including Minimum Thk and Corelation of Marking with MTC	100%	Drawing and Material Specification	Drawing and Material Specification	MTC	H	W	
		Verification of transferred Marking before cutting	100%	App. Drawing	Marking of Job No., Part No., Material Spec., Heat No. & plate No.	Inspection Report / Material History Sheet	H	R	
	B. Bought Out Items - Forgings, Fittings ,Gaskets and Fasteners	Review of MTC and Corelation of Material Marking with MTC	100%	Drawing and Material Specification	Drawing and Material Specification	Material History Sheet	H	R	

<b>Dished End after forming</b>									
08	A. Shape and Dimensions check	Min. Thickness and Profile check with Template, Visual & Dimensional Check	100%	Drawing and UG-81 of ASME Section VIII Division 1	Drawing and UG-81 of ASME Section VIII Division 1	Dish End Inspection Report	H	W	
	B. Visual examination and PT on knuckle & SF (inside and outside)	Visual and PT for surface defects	100%	GP-QCP-02	ASME Section VIII Division 1	Dish End Inspection Report	H	R	
	C. Heat Treatment after Forming (as applicable)	Review of Time Temperature Chart	100%	GP-QCP-06	Drawings and ASME Section VIII Division 1	Time Temperature Chart	H	R	

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<b>In Process (Fit ups and Back-chip)</b>									
09	1. Fit Up for Long Seam of Shell, Jacket & end closure	Visual and Dimension check, shape check with template, Root gap, root face, bevel angle, offset, PT of weld edge preparation	100%	Drawings & GP-QCP-02	Drawings & ASME Code Section VIII Division 1	Inspection Process Checklist	H	W	
	2. Fit Up for Pipe to Flanges/ Fittings	Visual and Dimension check, Root gap, root face, bevel angle, offset, PT of weld edge preparation	100%	Drawings & GP-QCP-02	Drawings & ASME Code Section VIII Division 1	Inspection Process Checklist	H	R	
	3. Fit Up for Nozzle to Shell , Dished Ends & Blind Flange.	Visual and Dimension check, Root gap, root face, bevel angle, PT of weld edge preparation	100%	Drawings & GP-QCP-02	Drawings & ASME Code Section VIII Division 1	Inspection Process Checklist	H	W	
	4. Fit-up of Circumferential Seam for Shell to Shell Flange & Shell to Head	Visual and Dimension check, Root gap, root face, bevel angle, offset, PT of weld edge preparation	100%	Drawings & GP-QCP-02	Drawings & ASME Code Section VIII Division 1	Inspection Process Checklist	H	W	
	5. Backchip of Long Seam, Circumferential Seam, Nozzle to Shell / Dish / Jacket weld joints	Visual & PT	100%	Drawings & GP-QCP-02	Drawings & ASME Code Section VIII Division 1	Inspection Process Checklist	H	--	
<b>VISUAL INSPECTION BEFORE CLOSING DISHED END FIT UP</b>									
10	Internal Visual Inspection of Vessel before internal assembly	Visual Check	100%	App. Drg.	App. Drg.	Inspection Process Checklist	H	H	

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<b>Non Destructive Examination</b>									
12	1. Liquid Penetrant Examination of Final Welds	Surface defects	100% Butt welds, fillet welds and attachment welds	ASME Section V and GP-QCP-02	ASME Section VIII Division 1 and GP-QCP-02	Liquid Penetrant Examination Report	H	--	
	2. Radiography of Butt Welds	Review of RT Films	spot	ASME Section V and GP-QCP-01	ASME Section VIII Division 1 and GP-QCP-01	Radiography Examination Report	H	R	
13	Final visual and dimensional check before hydrostatic test	Visual & Dimension check	100%	Drawings and ASME Section VIII Division 1	Drawings and ASME Section VIII Division 1	Inspection Process Check List / Final Dimension Report	H	H	
14	Hydrostatic test of Shell	Pressure tightness	100%	Drawings and GP-QCP-05	Drawings and ASME Section VIII Division 1	Pressure Test Report	H	H	
15	Name Plate Verification and obtaining authorization for Code Stamping	Verification of Marking / Name plate and Code Stamping	100%	Drawings and ASME Section VIII Division 1	Drawings and ASME Section VIII Division 1	Rub - Off / Inspection Process Checklist	H	H	
16	External / Internal Painting / Preservation (As Applicable)	Visual Check with Comparator, DFT	100%	Drawings	Drawings	Inspection Report	H	--	
17	Manufacturer's Data Report (MDR)	Verification of Documents & signing of MDR	100%	Drawings and ASME Section VIII Division 1	Drawings and ASME Section VIII Division 1	MDR	H	H	

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