



# VS FORGED FITTINGS

Product Stage		<b>QUALITY ASSURANCE PLAN</b>						Doc Ref No	QF/QC/09	
Control Plan Number: CP -01		Mr. Punya Gupta - 9999889008						(Rev.) :	00	
Part Name	High Pressure Pipe Fittings							Key Contact / Phone :		
Plant	JALANDHAR									
Part	Process Name/Operation Description	Machine, Device, Jig	Characteristics		Measurement Technique	Methods		Reaction		
Process Number		Tools For Mfg.	Product	Product/Process		Size	Sample Frequency	Control Method	Plan	
1	Raw Material Incoming Inspection Round/Billet	-	Visually	Burr Free Fine Surface Finish No Crack, No Fold	Visually	100%	On Receipt of Raw Material	Recorded in Receipt Inspection report QF/7/28 Rev . 00	if not ok material found , then hold the material and intimate to the reporting officer for the further action.	
		-	Dimensionally	( Round/ Billet ) Tol. $\pm$ 1 mm	Vernier Calliper	As per S-1 Sampling Plan 1 % AQL	On Receipt of Raw Material	Recorded in Receipt Inspection report QF/7/28 Rev . 00	if not ok material found , then hold the material and intimate to the reporting officer and if deviation is given by prod or quality manager then it's ok .otherwise reject the material.	
		-	Chemical Composition within Specification	As per ASME B16.11 C -0.35 Max Mn -0.6-1.05 S -0.040 Max P -0.035 Max. Si -0.1-0.35 Cu - 0.40 Max. Ni - 0.40 Max. Cr - 0.30 Max. Mo - 0.12 Max. V - 0.08 Max.	As per IS 1239 Part -2  S -0.050 Max P -0.050 Max.	As per QP/QC/01 Rev - 01	On Receipt of Raw Material	100% Test Certificates from Supplier End / And chemical analysis performed from NABLregistered lab. One out of each five heats if material received from RASHTARIYE ISHPAT .otherwise each heat spectro done received from any other vendor.	if not ok material found , then reject the material and mark red colour on it or return the material to vendor.Intimate to Prod.&Q.C Mgr.	
		UTM M/C	Mech. Properties	As per ASME B16.11 Tensile Strength - 0.485 KN/MM <sup>2</sup> Min. Yield Strength - 0.250 KN/MM <sup>2</sup> Min Elongation - 22% Min	As per IS 1239 Part -2 Tensile Strength - 0.320 KN/MM <sup>2</sup> Min.	UTM Machine	As per QP/QC/01 Rev - 01	On Receipt of Raw Material	Recorded in Mechanical Test Record of each heat	if not ok material found , then reject the material and mark red colour on it or return the material to vendor.Intimate to Prod.&Q.C Mgr.
	Raw Material Incoming Inspection Zinc	Min 98.5 %						Test Certificate from Supplier	Intimate to Prod.&Q.C Mgr. for any disposition action.	
2	Blank Cutting	Blanking Press	Blank Wt.	Blank Wt. Should be as per Specified in Blank Charts	Digital Weighing Scale	Avg. of 5 Pcs	Set up Approval.	Recorded in Production Log Book QFM/PROD/01 Rev . 03	Intimate to Prod.&Q.C Mgr. for any disposition action.	
3	Forging	Forging Press/Hammer	Dimensionally.	As per Drawing Manual Std. Ref. ASME B16.11 IS 1239 Part -2	Vernier Calliper	03 pc.	Two times a day.	Recorded In process Inspection Report Forging QF/QC/01 Rev 03	Intimate to Prod.&Q.C Mgr. for any disposition action.	
4	Stamping/Marking	Stamping M/C	Marking of VS Brand with Item Name and Size  Letters should be clear.	(1) No Offset.  (2) Letters should be Clear.	Visually	03 pc.	Two times a day.	Recorded In process Inspection Report Forging QF/QC/01 Rev 03	Intimate to Prod.&Q.C Mgr. for any disposition action.	
5	Drilling	Drilling M/c	Componets Should be OK as per inspection with Plug Bore Gauge.	Bore Size as per Vernier Caliper	Vernier Caliper	03 pc.	Two times a day.	Recorded In process Inspection Report M/C QFM/QC/03 Rev - 04	Intimate to Prod.&Q.C Mgr. for any disposition action.	

6	Facing and Chamfering	Chamfering M/c Or CNC	Dim. Of Side Length/Total Length	As per Drawing Manual Std. Ref. ASME B16.11 IS 1239 Part -2	Vernier Calliper and Visually.	03 pc.	Two times a day.	Recorded In process Inspection Report M/C QFM/QC/03 Rev - 04	Intimate to Prod.&Q.C Mgr. for any disposition action.	
7	Zinc Coating	Lab Equipments	Mass of Zinc Coating	As per Clause 13 of IS 1239 Part - 2	Chemicals for Lab Test	As per S-1 Sampling Plan 1 % AQL	on Galvanising of Lot	Recorded in QF/QC/08 Rev. 00	Intimate to Prod.&Q.C Mgr. for any disposition action.	
8	Threading	Threading M/c Or CNC	Componets Should be OK as per inspection with Plug Bore Gauge.	Thread as per Thread Gauge Std. Ref. as per IS 554 : 1999	Thread Gauge.	03 pc.	Two times a day.	Recorded In process Inspection Report M/C QFM/QC/03 Rev - 04	Intimate to Prod.&Q.C Mgr. for any disposition action.	
9	Alignment/Rt. Angle	Gauges	Alignment should be Ok as per Checking with Try Square		Try Square	03 pc.	Two times a day. Note: Hourly Inspection Pcs from each Product also Done and Checked OK Pcs are put on Inspection Table	Recorded In process Inspection Report M/C QFM/QC/03 Rev - 04	Intimate to Prod.&Q.C Mgr. for any disposition action.	
10	Inspection of Finished Product		(1) Dim (2) Alignment (3) Fine Surface Finish (4) Letters Should be Clear.	As per Drawing Manual Std. Ref. ASME B16.11 IS 1239 Part -2	Vernier Calliper Plug Bore Gauge  Try Square  Visually	As per S-1 Sampling Plan 1 % AQL	One time a Day	Recorded Final Inspection Report  QF/QC/02 Rev 02	Intimate to Prod.&Q.C Mgr. for any disposition action.	
			(1) Components Should be ok as per inspection with Thread Gauge.	Thread as per Thread Gauge Std. Ref. as per IS 554 : 1999	Thread Gauge.	As per S-1 Sampling Plan 1 % AQL	One time a Day	Recorded Final Inspection Report QF/QC/02 Rev 02	Intimate to Prod.&Q.C Mgr. for any disposition action.	
			Hydraulic Pressure Test	As per IS 1239 Part -2	Hydraulic Pressure Testing Machine	As per S-1 Sampling Plan 1 % AQL	One time a Day	Recorded Final Inspection Report QF/QC/02 Rev 02	Intimate to Prod.&Q.C Mgr. for any disposition action.	
			Pneumatic Pressure Test	As per IS 1239 Part -2	Pneumatic Pressure Testing Machine	100%	One time a Day	Recorded Final Inspection Report QF/QC/02 Rev 02	Intimate to Prod.&Q.C Mgr. for any disposition action.	
11	Washing	Washing M/c	Just Clean	Just Clean Fine Surface Finish Marking should be Clear	Visually	100%	On Receipt of Component from Final Inspection		Intimate to Prod.&Q.C Mgr. for any disposition action.	
12	Storage of Finished goods in Packing Section	Manually	Storage of Components with clear identification of Item , Size and Lot No.		Visually	100%	On Receipt of Component from Final Inspection	Recorded in Checked OK Card Code : QF/ST/05 Rev : 01	Intimate to Packing/Q.C I/C for any disposition action	
<b>Prepared By:</b> 			<b>Checked By:</b> 				<b>Approved By:</b> 