

VQC FOR TORSION BAR FORGING – T90

SI. No	Nomenclature & Drawing No.	Manufacturing Technology & Testing / Inspection Facilities required to produce the item	Must be possessed by the vendor in his own premises (List of Plant & Machinery and Testing / Inspection Facilities to be submitted)	Must be possessed by the vendor in his own premises or may outsource (Name and address of sub-contractor, list of Plant & Machinery and Testing / Inspection Facilities to be submitted)
		Raw material Cutting	Band saw cutting machine to cut minimum Dia 60mm.	Appropriate CAD/CAM Software for designing of dies suitable to fasteners as per given drg.
		Die	Suitable furnace with pyrometer to heat 1200°C minimum	
		Heating	Horizontal Upsetter with capacity force 800Ton or more and Grip 400 tons or more.	
		Forging for Upsetting	To accommodate multiple number of 60mm dia rod of length minimum 2600mm.	
		Shot blasting machine	Suitable furnace for Isothermal annealing to accommodate minimum 2600mm length. Capacity 1200°C.	
		Isothermal annealing	Suitable furnace with auto-cut off temperature at specified required temperature (In this case it should not be less than 100°C).	
	Manufacturing of Torsion Bar Forging to Drg 172.51.016-1/F	Truing of bars after heating not less than 100°C	A Hydraulic Press of capacity 20 ton or more to accommodate 2500mm length of bar.	
		Material Testing	Magnetic Particle Testing.	Chemical testing – Spectrometer
		Inspection	Hardness testing machine, Suitable Standard Calibrated Measuring Instruments and Gauges.	Mechanical testing – Rockwell, BHN, UTM, Impact and Metallography ultra sound test.