



BHARAT HEAVY ELECTRICALS LIMITED BHOPAL
QAP FOR SHAFT HOLE DIE TO BHEL DRAWING
QAP NO: QA/TGM/BO/SHD REV:01 DTD. 03/03/2020 Page 1 of 1

Sl.No.	Characteristic	Type of Check	Quantum of Check	Reference Documents	Acceptance Norms	Format of Record	Insp. Agency		Remarks
							M	B	
1	Punch/ Die (HCHCR grade)								
	a) Chemical Composition	Chem	Sample per melt	BHEL Specification AA10822/ BP10890	BHEL Specification AA10822/ BP10890	TC	P	R	
	b) Hardness	Mech	Sample	BHEL Specification AA10822/ BP10890	BHEL Specification AA10822/ BP10890	TC	P	R	
	c) Heat Treatment (Annealing)	Process	100%	BHEL Specification AA10822/ BP10890	BHEL Specification AA10822/ BP10890	HT Chart	P	R	
2	Punch/ Die Plate, Stripper and Stripper Pin, Packing Plate								
	a) Chemical Composition	Chem	Sample per melt	BHEL Specification AA10108	BHEL Specification AA10108	TC	P	R	
	b) Hardness	Mech	Sample	BHEL Specification AA10108	BHEL Specification AA10108	TC	P	R	
	c) Dimension	Thickness	100%	BHEL Specification AA10108	BHEL Specification AA10108	TC	P	R	
3	Dimension and Form Tolerances of tool	Measurement	100%	BHEL Ordering Drawing	BHEL Ordering Drawing	IR	P	W	CHP
4	Spring (Red, Yellow & Bronze)	Make/Type/ Model	100%	BHEL Ordering Drawing	BHEL Ordering Drawing	TC	P	R	
5	Identification and Marking on Punch and Die (Cutting Load, Shut Height, Stroke, Tool No and PO No)	Visual	100%	BHEL Ordering Drawing	BHEL Ordering Drawing	TC	P	W	CHP
6	Performance test of Shaft Hole Die	Smooth Sliding, Burr Level, Dimension, eccentricity and Ovality of Punching	5 pieces of Punching	BHEL Ordering Drawing	BHEL Ordering Drawing	IR	P	W	CHP Burr level < 40 Microns. Ovality < 0.02 mm Eccentricity < 0.08 mm

Legend: P-Perform, W-Witness, R-Record Review, M: Manufacturer/ Supplier B: BHEL/TPIA, CHP: Customer Hold Point.
Rev.01: addition of spec. BP10890

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