

Material	21132162003-00			Plant	P002
	DIFFUSER				
Group	50370171	Grp.ct	1	DIFFUSER	
	LSize From		1	LSize To	99,999,999 EA
	Use		1	Status	4 PlantP002
Sequence	0	Seq. Cat.	Std.seq.		
Operation	0010	Work Ctr	AJ9863	a)	Adhere to the "Technical Requirements" mentioned on the forging drg.no. 31132162906-00.
				b)	The forging is received in conformity with plant purchase specn. AA 19308
				c)	Verify the matl.attn.marks and test certificates, if any.
				d)	Ensure test sample shall be left integral with the forging.
		Ctrl Key	QM01		
		Base Qty		1	EA
Operation	0020	Work Ctr	AC4293		CNC-VERTICAL BORING M/C (KIRLOSKAR MAKE)
				a)	Clamp the forging on the table vertically such that the left end face, faces the machine spindle.
				b)	Turn the outer dia 625 (in place of dia616.20)to a length of 195 and the rest to dia535 for the remaining length as per sketch (Annexure-II)
				c)	Turn the stepped dia 505 to a length of 779 mm as per sketch (Annexure-II) which is enclosed herewith the Tech. Process.
				d)	Machine the following with 1mm allowance on the left & right faces. Refer"PREMACHINING DETAIL BEFORE OVERLAY"
				e)	Machine dia417x45°; R137.5x 2.5 & dia 275x140 completely for Ni Cr 082 deposition, considering 1mm allowance left on the surface.
				f)	Reverse and clamp.
				g)	Finish machine otherside face and maintain overall length 1255.
				h)	Finish machine the annular groove on the

				face for stellite-6 deposition.
			i)	Counterbore dia405 to a length of 80
		Ctrl Key	ZP01	
		Base Qty		1 EA
		Setup	60	MIN Machine 1,200 MIN
		Labor	1,200	MIN
Operation	0030	Work Ctr	AC9863	Inspection.
		Ctrl Key	QM01	
		Base Qty		1 EA
Operation	0040	Work Ctr	AB2852	Refer "NOTES" mentioned on the drg.
				a) Deposit NiCr 082 metal in the groove at detail-X as per WPS.NO-WE 116.
				b) Deposit stellite-6 metal on the face at detail-Y as per WPS.NO-WE 374.
		Ctrl Key	ZP01	
		Base Qty		1 EA
		Setup	15	MIN Machine 735 MIN
		Labor	735	MIN
Operation	0050	Work Ctr	AB1716	a) Place the component horizontally in the furnace.
				b) Anneal for stress relieving as per WPS.NO - WE 374 and the stress relieving cycle given below:
				Rate of heating : 60°c/hr
				Stress rel. temp : 680-720°c
				Soaking time : 3 Hrs.
				Rate of cooling : 60°c
				Allow it to cool slowly in the furnace.
		Ctrl Key	ZP01	
		Base Qty		1 EA
Operation	0060	Work Ctr	AB9863	Inspection.
		Ctrl Key	QM01	
		Base Qty		1 EA
Operation	0070	Work Ctr	AC4293	CNC-VERTICAL BORING M/C (KIRLOSKAR MAKE)
				NOTE: Do not machine taper bore, recess groove and inner bore details (at det-Y) at this stage.
				a) Clamp the job vertically on the table such that the right end face, faces the machine spindle.

				b)	Skim cut on right end stellited face and get it D.P.checked.		
				c)	Finish turn outside dias dia525, dia495, dia530 -0.5 and their lengths including radii at corners as per drg.		
				d)	Transfer matl.attn.marks.		
				e)	Reverse and clamp.		
				f)	Skim cut on deposited surface (NiCr082) and get it D.P.checked.		
		Ctrl Key	ZP01				
		Base Qty		1	EA		
		Setup		60	MIN	Machine	900 MIN
		Labor		900	MIN		
Operation	0080	Work Ctr	AC9863		Carryout D.P.Check on the hard faces deposited and ensure 100% crack free. Inspection for dimns.		
		Ctrl Key	QM01				
		Base Qty		1	EA		
Operation	0090	Work Ctr	DG4751		DEEP HOLE DRILLIG MACHINE (KOLB)		
				a)	Align and clamp the job in position for drilling of hole dia 15.		
				b)	Drill a hole of dia16.13 to a length of 1123 in place of dia15 from right end face.		
		Ctrl Key	ZP01				
		Base Qty		1	EA		
		Setup		40	MIN	Machine	270 MIN
		Labor		270	MIN		
Operation	0100	Work Ctr	DG9863		Inspection.		
		Ctrl Key	QM01				
		Base Qty		1	EA		
Operation	0110	Work Ctr	AC4293		CNC-VERTICAL BORING M/C (KIRLOSKAR MAKE)		
				a)	Hold the job on dia616.2 , such that the right end face, faces the machine spindle		
				b)	Machine the face by removing 1mm matl. & ensure 2mm thick hard face should retain, and maintain overall length 1254mm		
				c)	Finish machine the following dimensions		
					-bore dia415/length 100.9		
					-counterbore dia470 x 5		
					-recess dia468/width 25 and chamfer 45deg		

- Machine taper bore dia415/dia280 x3.9° to the extent possible length.
 - Cut the buttress threads S465x5 as per detail-Y, following drg. 33010100304-04
 - d) Collect the Threaded ring (Pos 16) from IS to suit the threading S465 x 5.
 - Get the identification marks marked on both the parts.
 - e) Reverse and clamp on dia 525 & align w.r.to machined surfaces.
 - f) Finish machine the otherside face and maintain overall length 1253mm.
 - g) Take a skim cut on dia 616.2 -0.03.
 - h) Finish machine the taper bore dia280x3.9° joining smoothly to the previously machined tapered bore.
 - i) Finish machine the contour completely as per detail-X.
- Note: Do not machine locating dia616.2 at this stage. This will be finish machined at opn. 018.

		Ctrl Key	ZP01				
		Base Qty		1	EA		
		Setup		60	MIN	Machine	900 MIN
		Labor		900	MIN		
Operation	0120	Work Ctr	AC9863	Carryout D.P.check on the hard surfaces at above opns.and ensure 100% crack free. Inspection for dimensions.			
		Ctrl Key	QM01				
		Base Qty		1	EA		
Operation	0130	Work Ctr	AF9412	Mark for drilling.			
		Ctrl Key	ZP04				
		Base Qty		1	EA		
Operation	0140	Work Ctr	AF4657	a)	Drill 1 x dia30 to depth 97.5 to connect the hole dia 16.13.		
				b)	Drill 1 x dia15 from inside the bore dia415 to connect hole dia 16.13.		
		Ctrl Key	ZP01				
		Base Qty		1	EA		
		Setup		90	MIN	Machine	75 MIN
		Labor		75	MIN		
Operation	0150	Work Ctr	AF9863	Inspection.			

		Ctrl Key	QM01			
		Base Qty		1	EA	
Operation	0160	Work Ctr	AC9412		Mark for slot milling.	
		Ctrl Key	ZP04			
		Base Qty		1	EA	
Operation	0170	Work Ctr	AC4821	a)	Clamp and align as per marking.	
				b)	Finish mill the slot to dimn. 11 x 10 on dia 525 as per drg.	
		Ctrl Key	ZP01			
		Base Qty		1	EA	
		Setup		30	MIN Machine	90 MIN
		Labor		90	MIN	
Operation	0180	Work Ctr	AC4293	a)	clamp on dia 525, align w.r.t. machined dias and faces.	
				b)	Finish turn (dia616.2 -0.03) as per the size given by assly. Q.C.	
					Note: Maintain geometrical accuracies and surface finish as per drg.	
		Ctrl Key	ZP01			
		Base Qty		1	EA	
		Setup		60	MIN Machine	120 MIN
		Labor		120	MIN	
Operation	0190	Work Ctr	AC9863		Final inspection. TO IS-3105.	
		Ctrl Key	QFNL			
		Base Qty		1	EA	