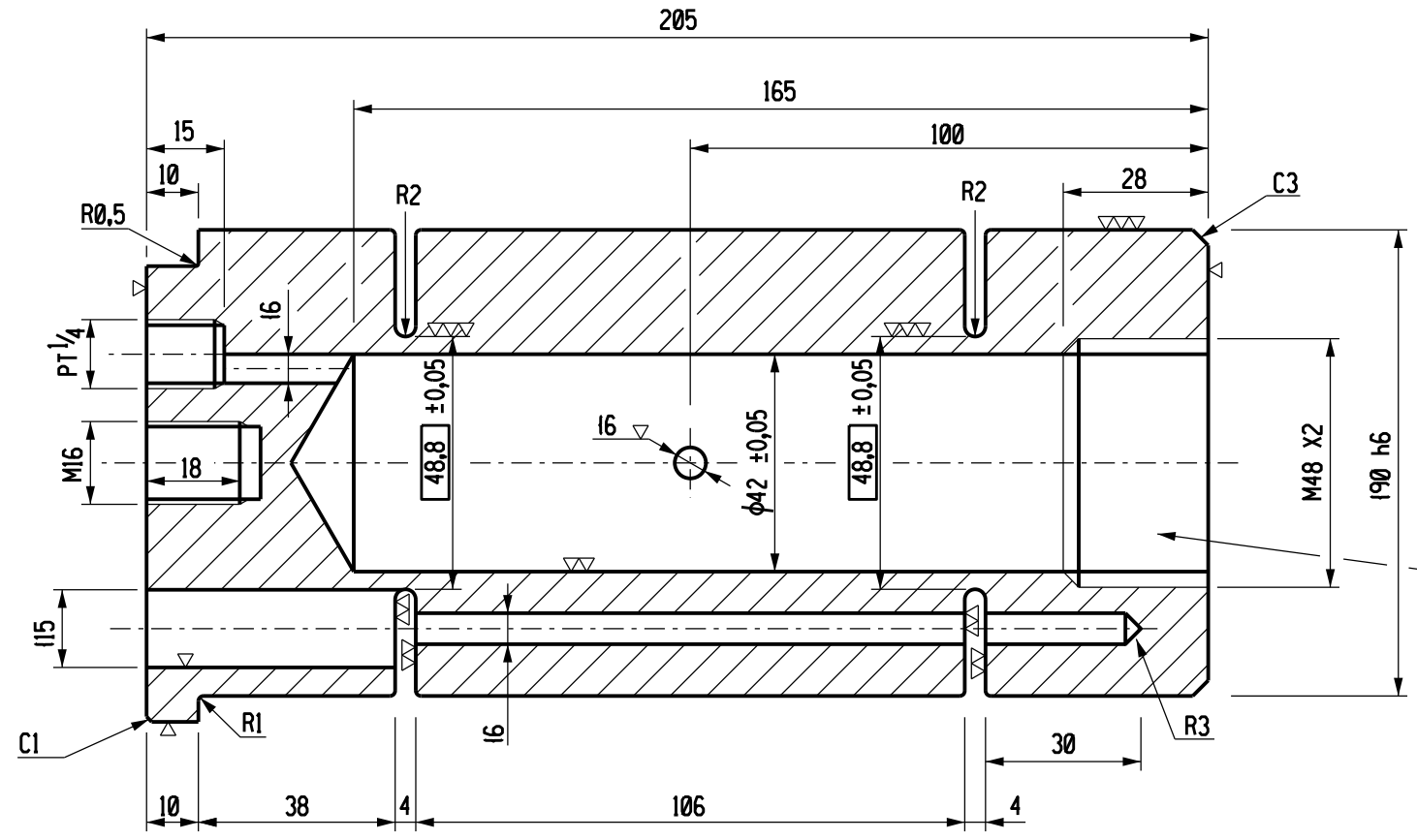


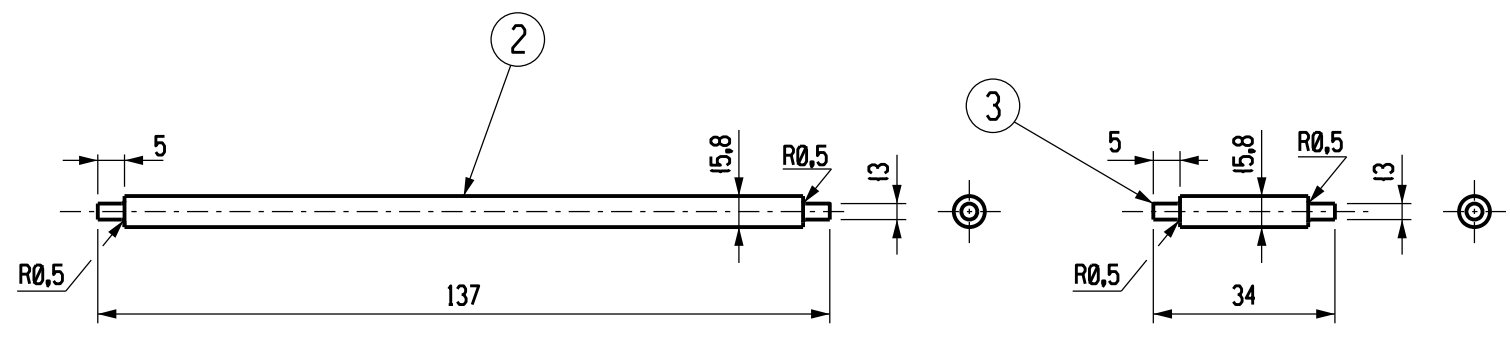
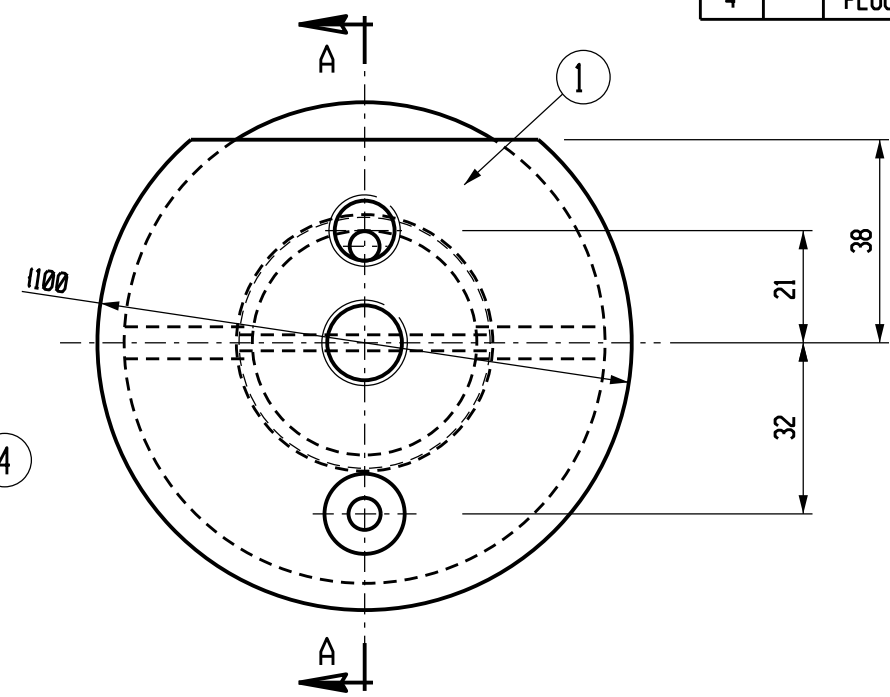
Informal Technical Evaluation Criteria			
Station:	Gariep Hydro Power Station		
Unit:	All		
Plant:	Shear Pins		
#	Evaluation Criteria	Submission Time	YES / NO
1	Proof of experience: Company to provide proof of in-house machining of components for at least 5 years.	Documents required upon tender submission	
2	Proof of precision machining experience: Tolerance capability of h6 or better. Surface roughness of 0.4 μm Ra or better.		
3	Shear pins are manufactured by the company who tenders and are not sourced out.		
4	Example of internal quality control documentation to be provided upon tender submission		
5	The original material spec for the shear pin is JIS S35C. If it cannot be sourced, provide full details of the proposed equivalent material.		
6	Shear pins are manufactured to drawing 18.38/3484. Pay special attention to the Notes on the drawing.	Documents required at a later stage. Indicate upon tender submission with a YES/NO whether you will comply.	
7	Material data sheet (Chem analysis, Mechanical parameters) for shear pins to be made available before delivery.		
8	Proof to be provided before delivery that all manufactured shear pins are defect free, e.g. NDT report.		
Please note, false or incorrect information can cause cancellation of the order/contract and/or return of the products without payment.			

BILL OF MATERIALS			
ITEM	QTY	DESCRIPTION	MATERIAL
1		SHEAR PIN	CARBON STEEL GRADE:080M40
2		137mm INDICATOR PIN	MILD STEEL
3		34mm INDICATOR PIN	MILD STEEL
4		PLUG	MILD STEEL

▽	= 3.2 µm Ra
▽▽	= 1.6 µm Ra
▽▽▽	= 0.4 µm Ra

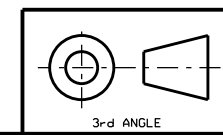


SECTION A-A




INDICATOR PINS

- NOTE:
- 1.) THE DIMENSION IN [] SHOULD BE DECIDED FINALLY SO AS TO GIVE THE BREAKING STRENGTH OF 43,500 Kg ON THE BASE OF SHEARING STRENGTH OF THE MATERIAL SHOWN AT MOCK-UP TEST.
 - 2.) THE DIMENSION SHOWN IN []S FOR CONVENIENCE OF MACHINING TEST PIECES, SUPPOSING THAT THE MATERIAL MAY SHOW SHEARING STRENGTH OF 45 Kg/mm² AT MOCK-UP TEST.
 - 3.) ALL SHARP EDGES TO BE ROUNDED SMOOTHLY.

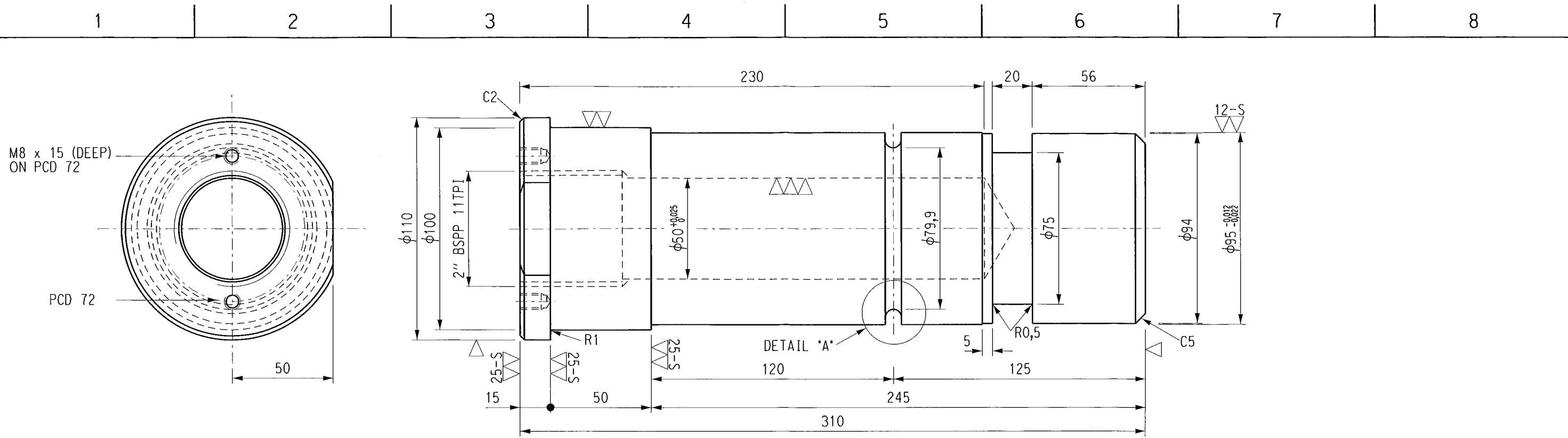


AS BUILT

18	3	2019-09-17	DRAWING BROUGHT TO AS BUILT STATUS DRILL PROFILE ADDED AS PER NOTIF. 24868624.	R.W	S.M	L.M	T.K				
18	2	2019-06-18	DRAWING BROUGHT TO AS BUILT STATUS AS PER NOTIF. 24868624.	R.W	S.M	L.M	T.K				
18	1	2007-11-23	INDICATOR PINS ADDED , CENTRE HOLE REVISED TO M16 AND GREASE HOLE MOVED 90L AS PER DEV No.GRP774 , AND MOD No's 250,251,252,253	R.A.	F.K.	P.NEL	M.VAN ROOYEN				
00	0		DEV. 56/98 FIRST ISSUE								
D.O.	REV	DATE	** REVISION **	REV BY	CHECK BY	APP BY	AUTH BY	EKS APP	38/	REFERENCE DRAWINGS	
AUTHORISED FOR ESKOM BY:			CLASSIFICATION PBS PATH 1-4 0MEX	<div>GARIEP POWER STATION</div> <div>MANUFACTURING DETAIL</div> <div>UNITS 1-4</div> <div>SHEAR PIN</div>							
D.J		98-08-12									
COODIFICATION BY:											
APPROVED BY:											
D.JOHNSON		98-08-12									
CHECKED BY:			 Eskom	ESKOM DRAWING No.							
JAC		98-08-12									
CREATED BY:											
B.M.M.		98-06-10	<div>18.38/3484</div>								
SCALE		1:1									SHT
			3								

GARIEP POWER STATION
MANUFACTURING DETAIL
UNITS 1-4
SHEAR PIN

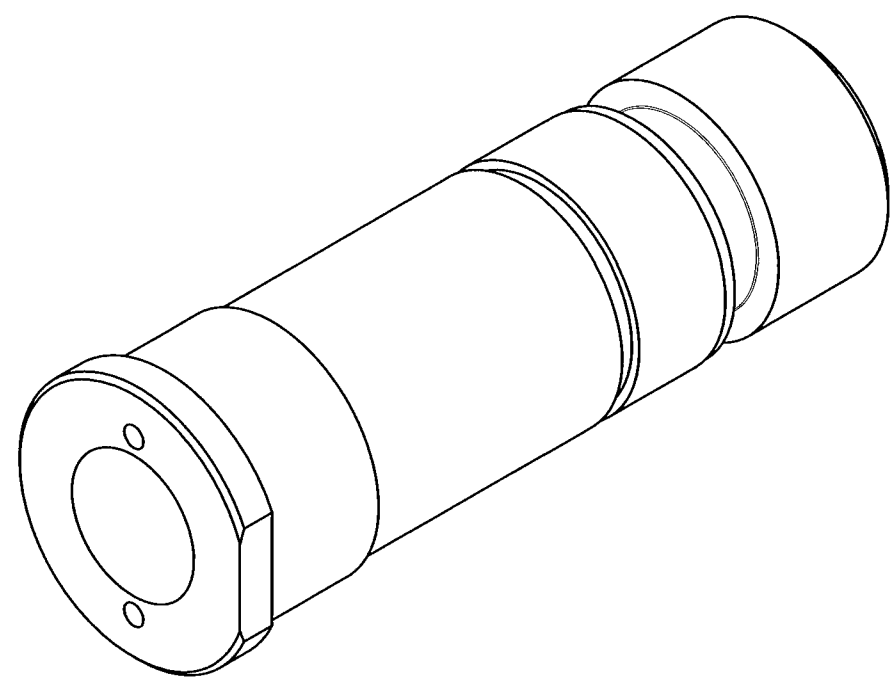
Informal Technical Evaluation Criteria			
Station:	Drakensberg Pumped Storage Scheme		
Unit:	All		
Plant:	Shear Pins		
#	Evaluation Criteria	Submission Time	YES / NO
1	Proof of experience: Company to provide proof of in-house machining of components for at least 5 years.	Documents required upon tender submission	
2	Proof of precision machining experience: Tolerance capability of g4 or better. Surface roughness of 0.4 µm Ra or better.		
3	Shear pins are manufactured by the company who tenders and are not sourced out.		
4	Example of internal quality control documentation to be provided upon tender submission		
5	The original material spec for the shear pin is G4051 S45C. If it cannot be sourced, provide full details of the proposed equivalent material.		
6	Shear pins are manufactured to drawing 18.48/U1/6276.	Documents required at a later stage. Indicate upon tender submission with a YES/NO whether you will comply.	
7	Material data sheet (Chem analysis, Mechanical parameters) for shear pins to be made available before delivery.		
8	Proof to be provided before delivery that all manufactured shear pins are defect free, e.g. NDT report.		
Please note, false or incorrect information can cause cancellation of the order/contract and/or return of the products without payment.			



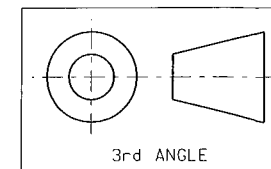
FRONT VIEW
SCALE 1:2

SIDE VIEW
SCALE 1:2

DETAIL A
SCALE 1:1



ISOMETRIC VIEW
N.T.S.



THIS DRAWING HAS BEEN CREATED
ON A MICROSTATION C.A.D. SYSTEM.
ANY AMENDMENT MUST BE EFFECTED
ON THE SAME C.A.D. SYSTEM.

AS BUILT

18	2		Ø75x20 GROOVE ADDED AS PER NOTIF. 25296219	S.M					
18	1	2021-11-12	DRAWING UNITIZED AND ADDED M8 STUD HOLE AS PER NOTIF. 25296219	L.W	S.MERVIN	J.VAN ZYL	E.DUMEMA		
18	0		FIRST ISSUE- NEW Dgn. CREATED AS PER DEV. DRP11726. MOD No. DRP00807M					U1- 6276 Sht. (2-5)	SHEAR PIN DETAILS
D.O.	REV	DATE	** REVISION **	REV BY	CHKD BY	AUTH BY	APP BY	KKS APP	48/ REFERENCE DRAWINGS
AUTHORISED FOR ESKOM BY:			CLASSIFICATION	<div>DRAKENSBURG PUMPED STORAGE SCHEME</div> <div>DETAIL DRAWING</div> <div>UNIT 1</div> <div>GOVERNOR SYSTEM</div> <div>SHEAR PIN</div>					
I. MEYER 2014-03-28			PBS PATH 1 OMX						
CODIFICATION BY:									
APPROVED BY:									
T. KEYSER 2014-03-31				<div>ESKOM HOLDINGS SOC Ltd.</div> <div>REG No. 2002/015527/30</div>					
CHECKED BY:									
SDK 2014-03-28									
CREATED BY:									
RLR 2014-01-29				ESKOM DRAWING No.					
SCALE		AS SHOWN		18.48/U1/6276					
				SHT 1					
				REV 2					