

PURCHASER'S DATA

A. Site conditions				
1	Ambient temperature,	minimum:	1	°C
		maximum:	39.8	°C
		design:	40	°C
2	Relative humidity:		93	%
B. Technical particulars				
1	Motor tag no.:	117-PM-935		R1
2	Driven equipment name:	LUBE OIL PUMP		
3	Voltage:	415 V ± 6 %		
4	Phase:		Three	
5	Frequency:	50 Hz ± 3%		
6	Fault level:		N.A	
7	Method of starting:		D.O.L.	
8	Winding connection:		Delta	
9	No. of terminals:		6	
10	Cable size:	3C X 4 SQMM		R1
11	Cable type:	CYFYF		R1
12	Temperature rise:		80 °C	
13	Cooling:		TEFC	
14	Insulation class:	Class F with temp rise limited to Class B.		
15	Temp class:	T5		
3	Atmospheric condition:		Humid & highly corrosive	
4	Altitude:		< 1000 m	
5	Location:		— Inside shed	
16	Hazardous area classification:		Zone 2	
17	Gas group/Temp class:		IIA/IIIB	
18	Type of explosion protection:		Ex d	
19	Type of ingress protection:		IP 55	
20	Color shade:		632 as per IS 5	
21	Thermistors:		☒ Required	☒ Not required
22	RTD:		☒ Required	☒ Not required
23	BTD:		☒ Required	☒ Not required
24	RTD/BTD monitoring device:		☒ Required	☒ Not required
25*	Applicable specification:		EIL spec. 6-51-0032 & 6907-117-16-50-SP-5296	

DRIVEN EQUIPMENT MANUFACTURER'S DATA

1	Suggested motor rating:	1.1	kW	9	Torque required, starting: 100% of FLT
2	Manufacturer:	LATER			maximum: - mkg
3	BkW at full load:	0.7	kW	10	GD ² of eqpt., including flywheel: 0.12 kgm ²
4	kW at end of curve:	0.8	kW		excluding flywheel: kgm ²
5	Speed:	1440	RPM	11	Thrust, up: No Axial Thrust
6	Rotation viewed from coupling end:	CCW			down: No Axial Thrust
7	Driven equipment:	GEAR PUMP		12	Starting condition: OVC (FULL LOAD)
8	Coupling type:	DIRECT FLEXIBLE			

MOTOR MANUFACTURER'S DATA

1	Rating:	1.1	kW	17	Efficiency at, 75% voltage:	77	%
2	Manufacturer:	M/s Bharat Bijlee Ltd			100% voltage:	78	%
3	No. of poles:	4		18	Power factor at, starting:	0.65	
4	Frame designation:	MJ90 , MD09L433			75% / 100% load:	0.73/0.80	
5	Full load speed:	1410	RPM	19	Moment of inertia, GD ² :	0.012	kgm ²
6	Mounting:	83		20	NDE bearing type & no.:	Ball Bearing - 6205 C3	
7	Full load torque (FLT):	0.76	mkg	21	DE bearing type & no.:	Ball Bearing - 6205 C3	
8	Starting torque:	230	% of FLT	22	Type of lubrication:	Grease- LGMT3	
9	Break down or pull out torque:	270	%	23	Weight of motor:	48	kg
10	Full load current (FLC):	2.5	A	24	Thermistors, quantity:	NA	no.
11	Starting current at 100% voltage:	420	% of FLC		make:	type: NA	
12	Rotation viewed from coupling end:	CW		25	RTD, quantity:	NA	no.
13	Starting time at, 75% voltage:	2	sec.		make:	type: NA	
	100% voltage:	1	sec.	26	BTD, quantity:	NA	no.
14	Locked rotor withstand time (cold/hot) at,				make:	type: NA	
	75% voltage:	53 / 27	sec.	27	Shaft voltage:	200m	V
	100% voltage:	30/15	sec.	28	Critical speed, 1 st /2 nd stage:	3000 / #	RPM
15	Time (Te) for increased Safety motors :	NA			29	Canopy (FRP):	Not Required
16	Space heater - voltage & power:	Reqd. for ratings > 22kW					
17	Applicable IS/IEC for hazardous area application:	I.S.-325 (1996), IEC 60079 part-1 & others.					

- Starting time calculations shall be based on operating conditions specified on Material Requisition eg. open valve condition/ closed valve condition, at no load/full load, as applicable.
- All unfilled data shall be filled by vendor.
- Separate datasheet shall be filled for each tag no. of motor

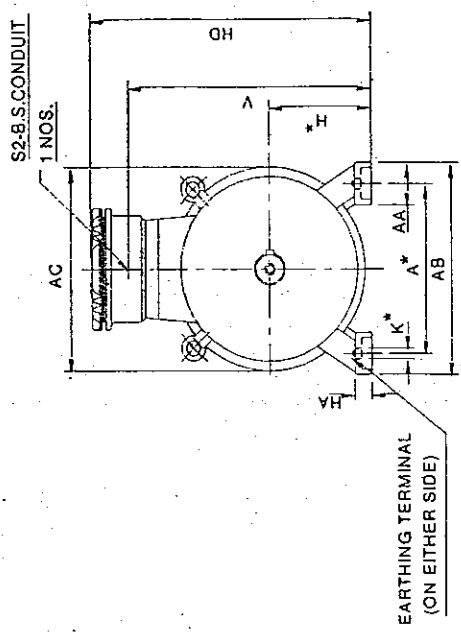
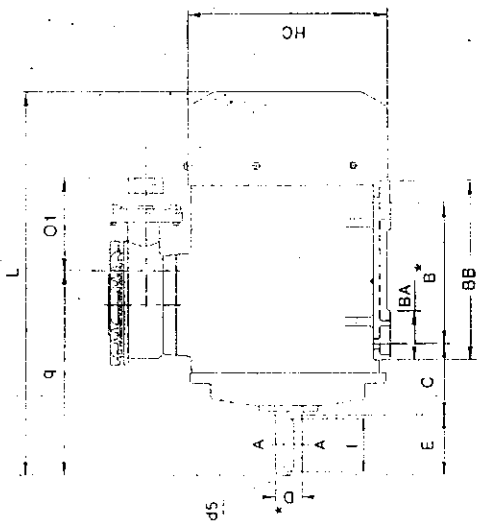
Our rotor are stiff rotor as per clause 10.0 of EIL specn. Hence lower than syn. Speed no critical speed is arise.
Note : All performance figures are subject to IS 325 : 1996 tolerances.

REV 1 MADE BY SSP ON 7.11.11

For M/S BBL prepared by SSP on 13.09.2011

Bharat Pumps & Compressor Ltd.
Main, Allahabad

A	25.11.2010	ISSUED WITH MR	RKR	VKJ	AK
Rev. No.	Date	Purpose	Prepared by	Checked by	Approved by



FIXING GENERAL TERMINAL BOX SHAFT

IEC BBL Fr. size	Pole	A	B	C	H	K	A*	AB	BB	AA	BA	HA	HC	HD	L	AC	V	O1	q	S2	B.S.C.	D	E	F* GA*	I	d5
90L MD90	4	140	125	56	90	10	180	160	50	40	13	177	336	382	174	269	—	141	195	3/4"	24	50	8	27	45	M8

PESO-CERTIFICATE No.: A/P/HQ/MH/104/1518.DTD.1/4/2008
(P210867)

CIMFR CERTIFICATE No.: CIMFR/TC/SR/M572

J.D.No.: 326/07 Dtd.22/10/2007

BIS LICENSE No.: CM/L-0366749.

Submitted for
final approval.

[Signature]
05/12/11

Director & Compressor Ltd.
Mumbai, Allahabad

OVERALL DIMENSIONAL DRAWING
FLAME PROOF (FOOT MOUNTED) EFF 2 MOTOR
FR SIZE 90L

Dimension	Tolerance	Specification
A, B	±0.75	
H	-0.5	
K	-0.360	IS : 1231
D	16	240
G.A.F		IS : 2048
d5 (centering)		IS : 2540

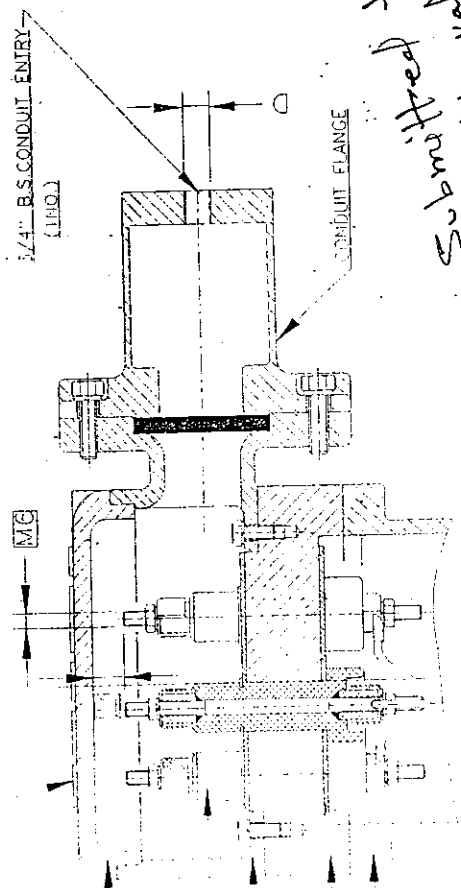
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	DRN	3-9-11	K.G.K.			
	CHD	3-9-11	J.B.G.		62174-10	
BHARAT BULEE LTD. KALWA				DRG No.	D09L43012	
					FR SIZE MD90L	

① AMENDED AS PER CLIENT COMMENTS & CI NO.12/7263, P.S.T. 17.11.11
② AMENDED AS PER CLIENT COMMENTS & CI NO.12/7263, P.M.C. 02.12.11

PESO CERTIFICATE No.: AP/HQ/MH/104/1518
 Dtd. 14/2008
 (P2108674)

CIMFR CERTIFICATE No.: CIMFR/TC/SR/H572
 Dtd. 22/10/2007
 I.D. No.: 326/07
 BIS LICENCE No. CM/L-0366749

GENERAL INSCRIPTION "DO NOT OPEN WITH POWER ON" CASE
 STOPPED ON TERMINAL BOX COVER BY RAISED LETTERS



*Submitted for
 final approval.*

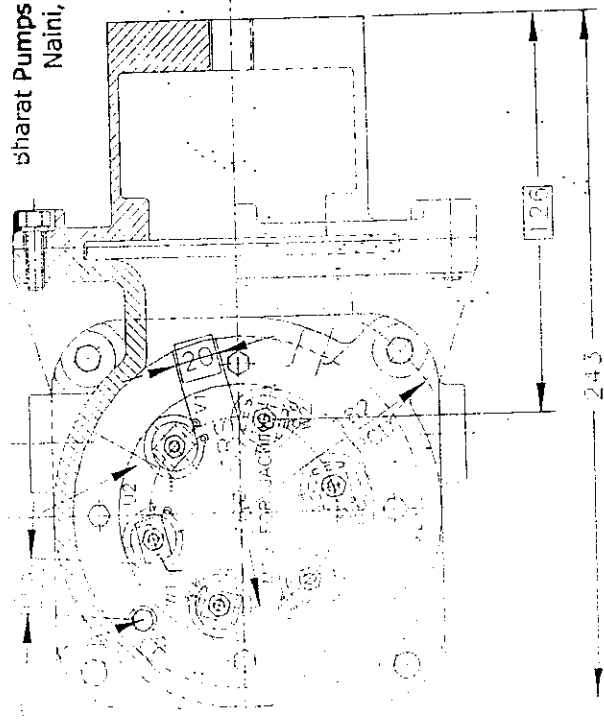
*Sharar Pumps & Compressor Ltd.
 Naini, Allahabad*

NOTE:

- 1) PHASE TO PHASE DISTANCE = 20mm.
- 2) PHASE TO EARTH DISTANCE = 19mm.
- 3) PHASE TO WALL DISTANCE = 30mm.
- 4) STUD SIZE = M6
- 5) STUD TO GLAND PLATE DISTANCE = 126mm.
- 6) PVC HOOD FOR CABLE GLAND NOT IN BBL SCOPE.
- 7) CABLE LUGS NOT IN BBL SCOPE.
- 8) TERMINAL BOX MATERIAL = CI.
- 9) TERMINAL BOX IS ROTATABLE BY 360° IN THE STEP OF 90°.

TYPE REFERENCE:- MD09L433
 MOTOR RATING:- 1.1KW-4P

- Ø TAG NO. 117-93PM-935
- Ø CABLE SIZE:- 1Rx3Cx4mmsq.
 FOR CYFYF ARMoured CABLE. 650V.
- ① DIA UNDER ARMOUR :- 10.2mm
- ② DIA OVER ARMOUR :- 13mm
- ③ NORMAL OUTER DIA :- 16mm



BOX WITHOUT SEALING BOX FOR CONDUIT ENTRY.

NO. OF OFF	DESCRIPTION	ITEM NO.	CODE NO.	MATL.	QTY. NO.	PATTERN NO. OR SIZE	WT. kg.
1	TERMINAL BOX	1	1	1	1	1	1
2	TERMINAL BOX	2	2	2	2	2	2
3	TERMINAL BOX	3	3	3	3	3	3
4	TERMINAL BOX	4	4	4	4	4	4
5	TERMINAL BOX	5	5	5	5	5	5
6	TERMINAL BOX	6	6	6	6	6	6
7	TERMINAL BOX	7	7	7	7	7	7
8	TERMINAL BOX	8	8	8	8	8	8
9	TERMINAL BOX	9	9	9	9	9	9
10	TERMINAL BOX	10	10	10	10	10	10
11	TERMINAL BOX	11	11	11	11	11	11
12	TERMINAL BOX	12	12	12	12	12	12
13	TERMINAL BOX	13	13	13	13	13	13
14	TERMINAL BOX	14	14	14	14	14	14
15	TERMINAL BOX	15	15	15	15	15	15
16	TERMINAL BOX	16	16	16	16	16	16
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30	TERMINAL BOX	30	30	30	30	30	30
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96	TERMINAL BOX	96	96	96	96	96	96
97	TERMINAL BOX	97	97	97	97	97	97
98	TERMINAL BOX	98	98	98	98	98	98
99	TERMINAL BOX	99	99	99	99	99	99
100	TERMINAL BOX	100	100	100	100	100	100

SPEED Vs TORQUE & CURRENT CHARACTERISTICS

CUSTOMER

: BPCL, MOTOR TAG No: 117-PM-935

W.O. NO.: D4327/1

SAP NO: 62474/10

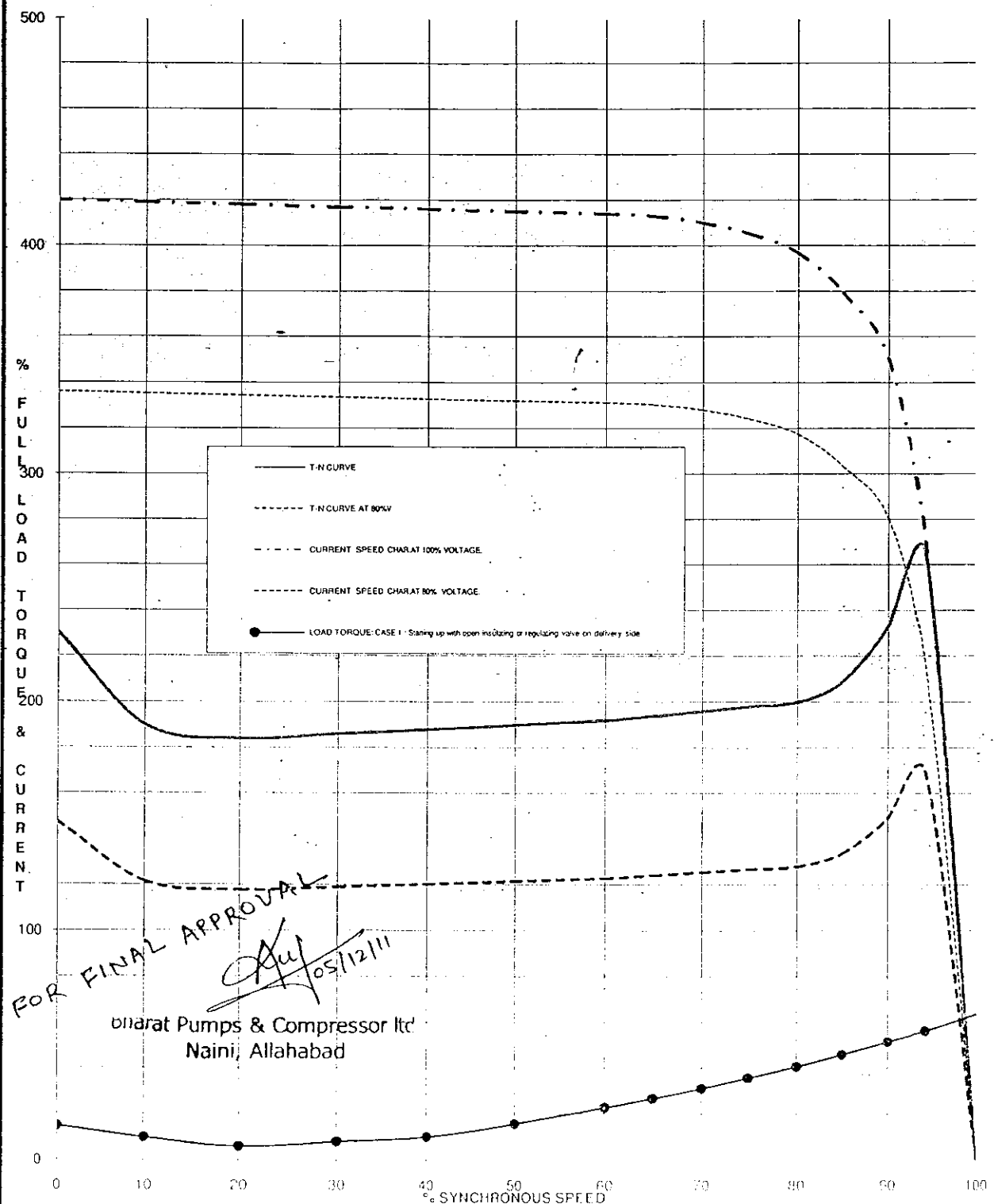
KW : 1.1

POLE : 4

VOLTS : 415

QTY :

1



2			PREP	SSP	13.09.2011
1			APPD	SSP	13.09.2011
NO	REVISION	SIGN		SIGN	DATE

LOAD Vs EFF., P.F.,

CUSTOMER

: BPCL, MOTOR TAG No. 117-PM-935

W.O. NO. D4327/1

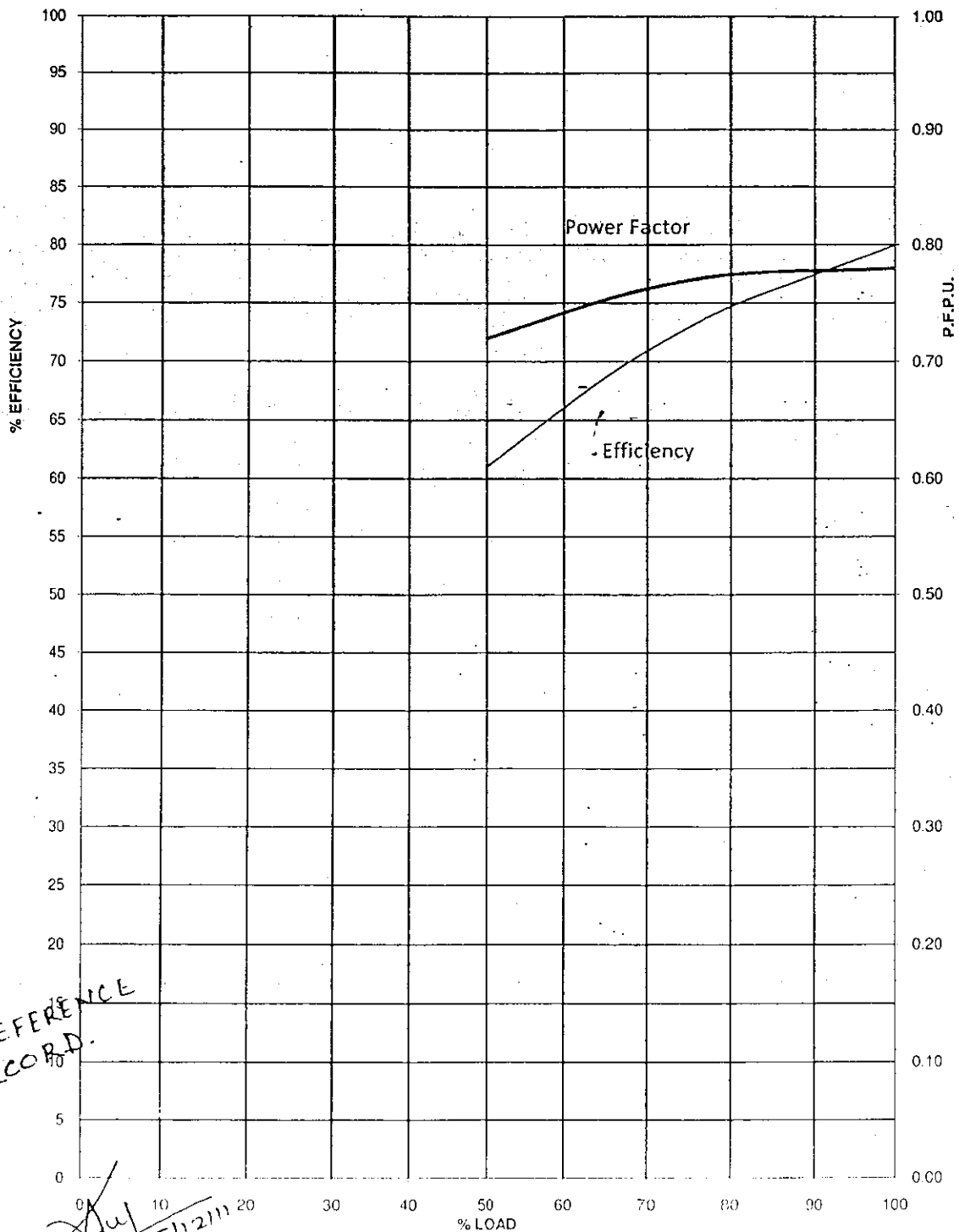
SAP NO: 62474/10

kW : 1.1

POLE: 4

VOLTS: 415

QTY: 1



FOR REFERENCE
& RECORD.

2	Bharat Pumps & Compressor Ltd Naini, Allahabad		PREP	SSP	13/09/2011
1			APPD	SSP	13/09/2011
NO	REVISION	SIGN			DATE

STARTING CURRENT VS STARTING TIME AND THERMAL WITHSTAND TIME.

CUSTOMER

: BPCL, MOTOR TAG No: 117-PM-935

W.O. NO.: D4327/1

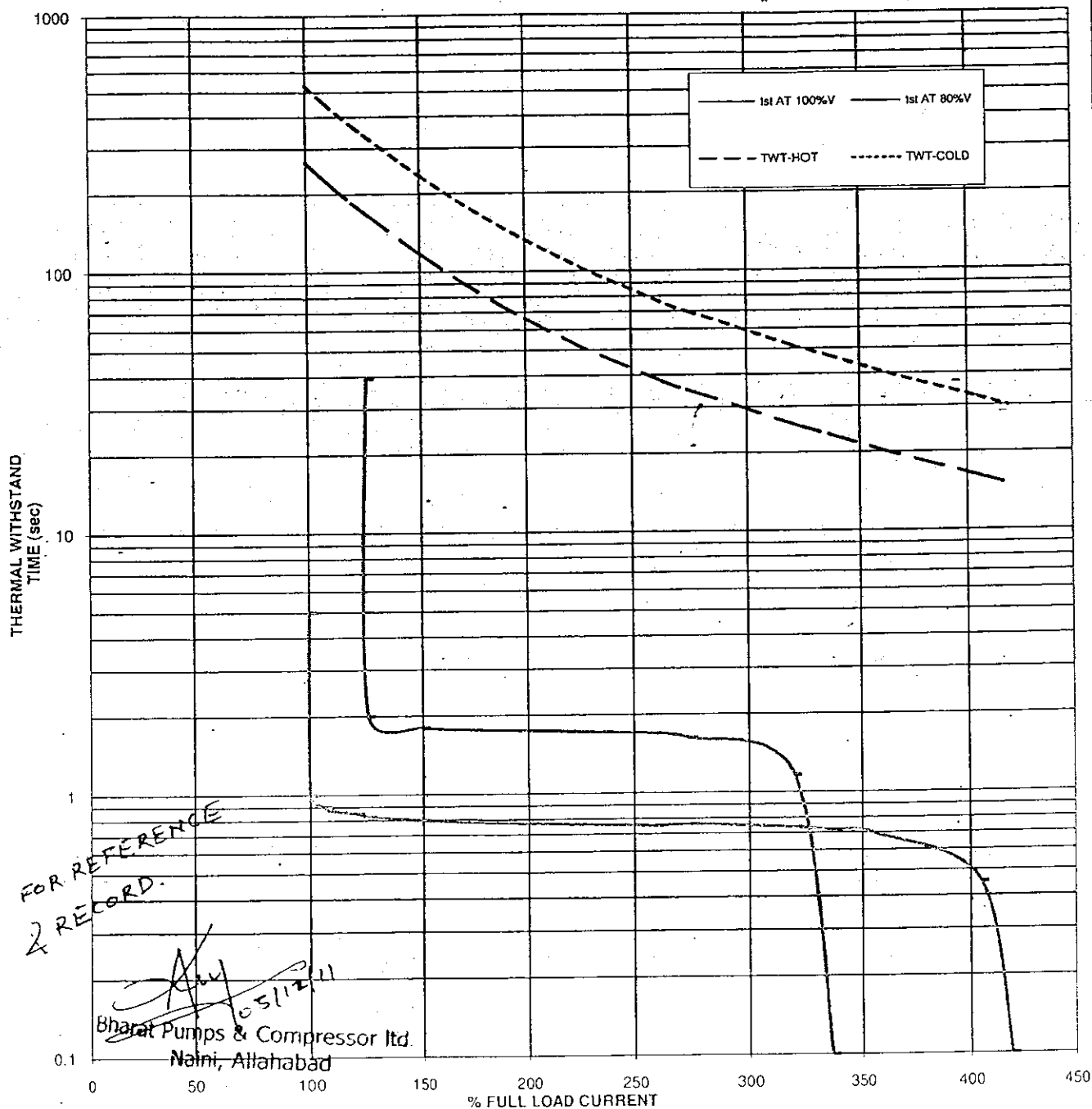
SAP NO: 62474/10

kW : 1.1

POLE : 4

VOLTS : 415

QTY : 1



L. R. CURRENT at 100% voltage :		420	% OF FLA	THERMAL WITHSTAND TIME(sec):	
Starting time at 100% voltage=		1	sec	AT100% RATED VOLTAGE (HOT) :	
Starting time at 80% voltage=		2	sec	AT100% RATED VOLTAGE (COLD):	
2				PREP	SSP
1				APPD	SSP
NO	REVISION	SIGN		SIGN	DATE

13/09/2011

13/09/2011

SPEED Vs TIME

CUSTOMER

: BPCL

W.O. NO. D4327/1

SAP NO: 62474/10

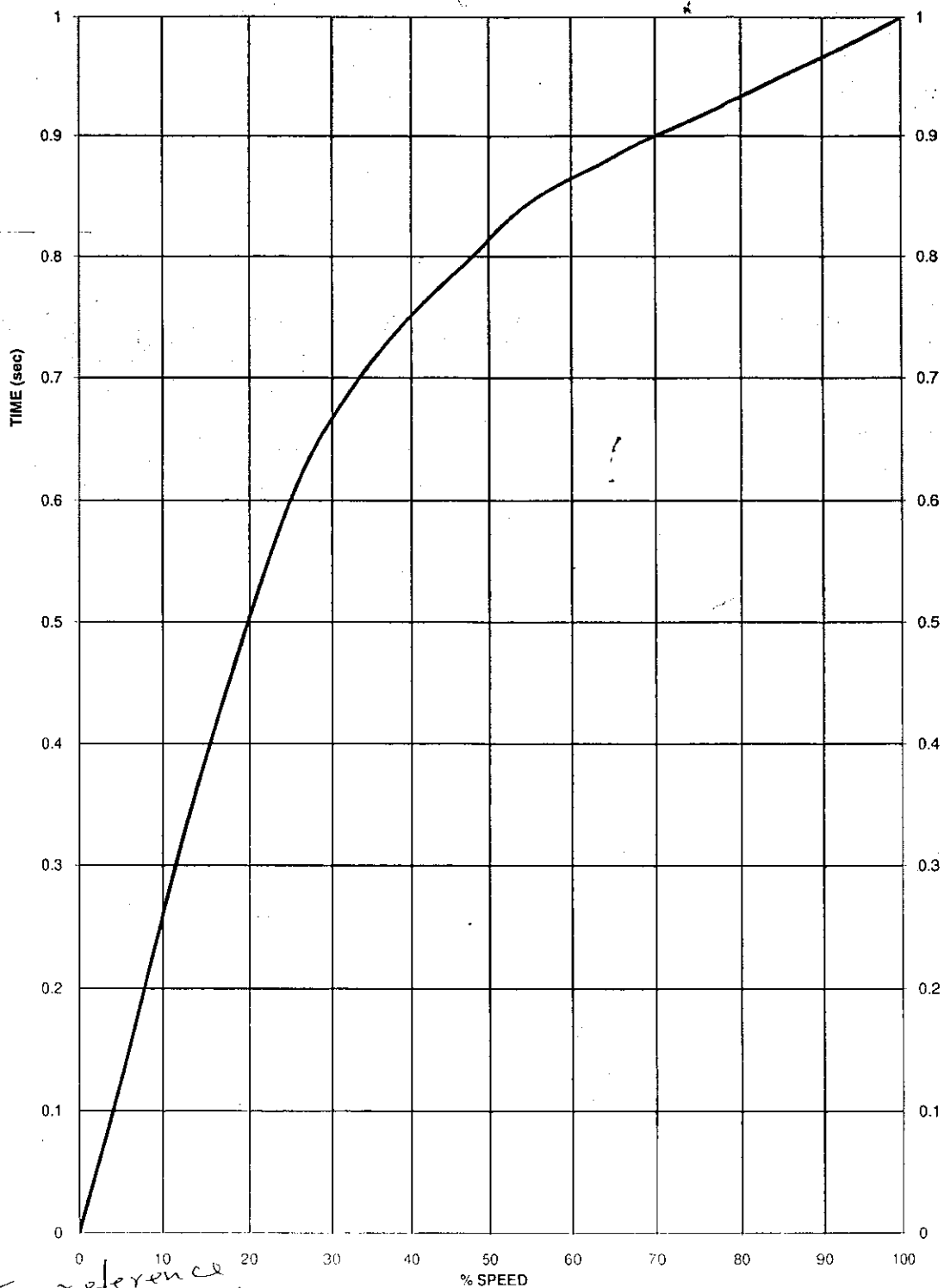
KW : 1.1

POLE : 4

VOLTS : 415

QTY :

1



For reference
to record

2			PREP	SSP	12/15/11
1			APPD	SSP	12/15/11
NO	REVISION	SIGN			DATE

Bharat Pumps & Compressor Ltd
Naini, Allahabad