



World Wide Power Services FZCO
P.O. Box 18088, Jebel Ali, Dubai
United Arab Emirates
Tel: + 971 4 886 1155 Fax + 971 4 886 1144

WWPS Job No. DW11517



AC Motor - Ex "e"

Parts fitted on Arrival					Quoted ^{18.04.13} DWQ 20251	Start: 19.08.13	Job No. DW11517							
Terminal Box	No	Pulley	No											
Terminal Lid	No	Coupling	No		Accepted: 19/08/2013	Complete: 28.08.13	Customer Top Oilfield							
Terminal Block	No	Hub	yes											
External Fan	No	Sprocket	No		Arrival Date:	14.08.13								
Ext. Fan Cover	No	Pinion	yes		Delivered By	Customer								
Eye Bolts		No	Gearbox	No		Contact Name & No.								
Side Covers		No	Pump	No		Manufacturer	GE							
Colour	YELLOW				Checked In By	RIPTON								
HP	1150		KW			KVA			Volts	587		Duty		
Amp	1120		Hz	117		Phase	3		RPM	800				
Serial No.		VV06050019			Frame	UNKNOWN		Type	UNKNOWN					
Additional Details			GEB 20 B3											

Work Done	Q	Parts Required / Fitted			Q
Collect Unit	No	Supply new Cooling fan			No
Dismantle, Inspect & Test	Yes	Supply new fan cover			No
Strip Stator / Rotor	No	Supply new V seal			Yes
Clean Core and slots	No	Supply new oilseals x 2			No
Carry out Core Flux Test	Yes	Supply new O Ring			No
Rewind Stator / Rotor to Class "F"	No	Supply new Mechanical Seal			No
Rewind Stator / Rotor to Class "H"	No	Supply new Thermistors			No
Steam clean, stove & re-varnish windings	Yes				
Supply & Fit New Leads	Yes	Supply new RTD's	Type	No.	No
Supply and fit new Bearings	Yes	Supply new Terminal			No
Assemble & Test	Yes	Supply new Terminal Box			No
Paint	Yes	Supply new Terminal Box Lid			No
Deliver	No	Record Flame Path dimensions			Yes
Grit Blast to SA 2.5	Yes	Fit new certified Eye Bolt			No
Sleeve DE Bearing Housing	No	Supply new Bartic Heater			No
Sleeve NDE Bearing Housing	No				
Weld & Machine DE Bearing Journal	No	Fit new AEMT Label IEC- 60079-19			Yes
Weld & Machine NDE Bearing Journal	No				
Dynamically Balance	Yes				

Q = Quoted

Additional Notes JOB REF NO A-9266



Incoming Inspection Report

Customer: Top Oilfield

Customer Ref.: A - 9266

Machine & Certification Details

Manufacturer GE

kW / HP 1150 HP

Order No.: 54693

Serial No: V V 06050019

Volts 587

Frame 112 M IEC

Ex Type Exe

Amps 1120

IP Rating 44 [open]

Protection Type: Ex d Ex de Ex e Ex N

RPM 800

Hz 117

Year of Manu 1996 Standard IEC UL ATEX Temp. Rating T3

Ins Class H

Motor Class I II Gas Group A B C D E F G Category 1 2 3

Mounting FOOT

Ex Certificate Number 01ATEX3196 X

Other Details	
Special Certification Manufacturer's Requirements? :	NO
Are Manufacturer's certification details available? :	NO

Incoming Inspection Results

B1 Insulation Resistance Test Voltage 500

Phase To Earth	Value
U1-E	100.0 M Ω
V1-E	100.0 M Ω
W1-E	100.0 M Ω

Phase To Phase	Value
U1-V1	N/A M Ω
V1-W1	N/A M Ω
W1-U1	N/A M Ω

C1 Winding Resistance	Ambiant <u>28</u> °C
Phase To Phase	Value
U1 - U2	0,0109 Ω
V1 - V2	0,0109 Ω
W1 - W2	0,0109 Ω

D1 Temperature Detectors:	Ambiant <u>32</u> °C
<u>6</u>	113.4 Ω

E1 No Load Test: V RPM

Phase	Current
L1	N/A Amps
L2	N/A Amps
L3	N/A Amps

F1 Vibration Test:

Drive End		Non Drive end
Horizontal	N/A mm/s	N/A mm/s
Vertical	N/A mm/s	N/A mm/s
Axial	N/A mm/s	N/A mm/s

Booked By		Dismantled By		Inspected By		Remarks	
Company	WWPS	Company	WWPS	Company	WWPS		
Sign		Sign		Sign			
Name	RIPTON	Name	VINODH	Name	SANTOSH		
Date	14.08.13	Date	14.08.13	Date	15.08.13		



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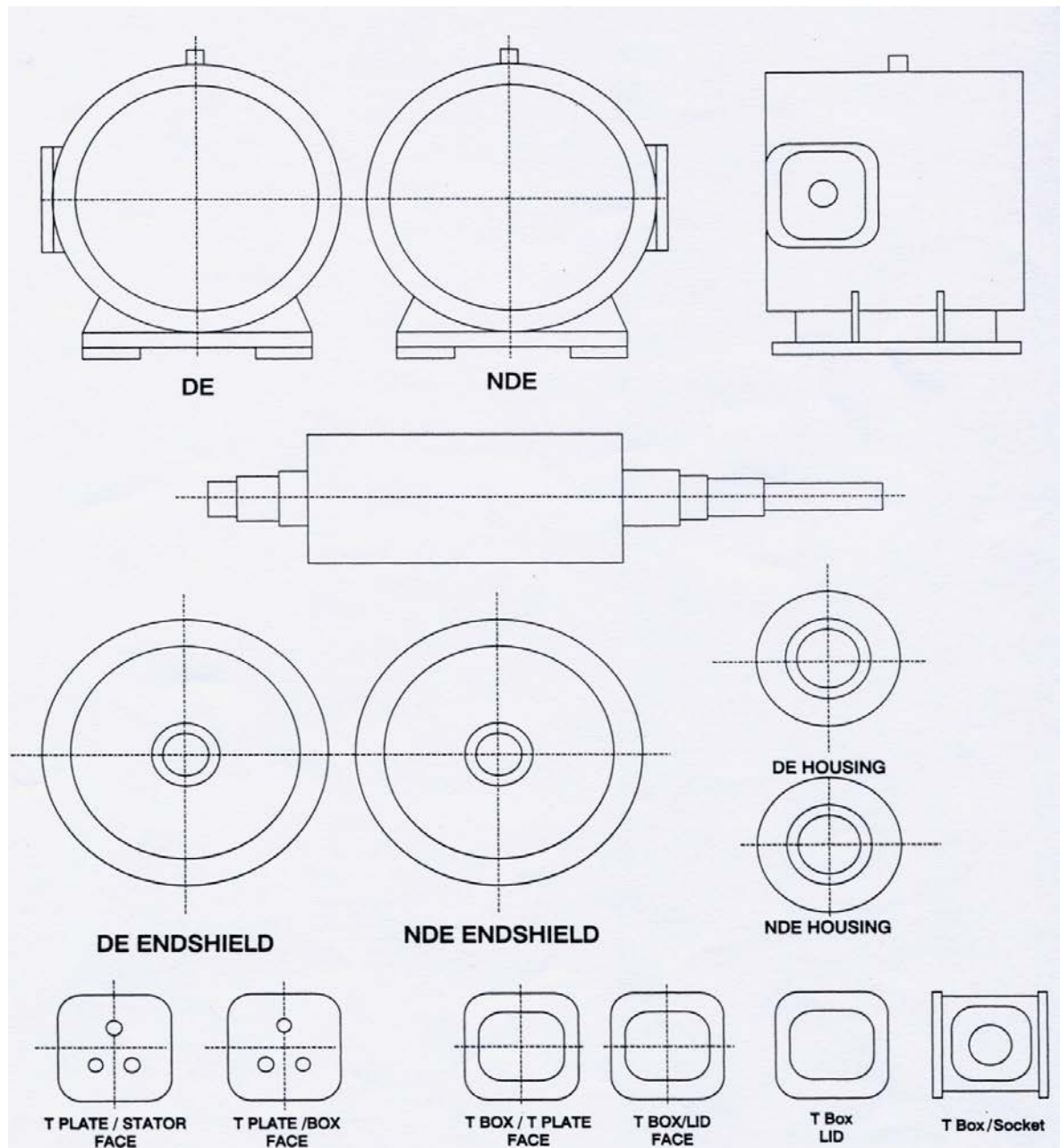
WWPS Job No. DW11517

	Description	Motor Inspection	Action Taken	Remarks		
		Conditions/Defects				
1	Motor main frame	Good	Cleaned	Accepted		
2	Coupling	PINION Good	Cleaned	Accepted		
3	Motor footing / mounting	Good	Cleaned	Accepted		
4	DE Endshield	Good	Cleaned	Accepted		
5	NDE Endshield	Good	Cleaned	Accepted		
6	DE Bearing Cap	Good	Cleaned	Accepted		
7	NDE Bearing Cap	Good	Cleaned	Accepted		
8	DE Bearing	WORN - 558830 - C	REPLACED	Accepted		
9	NDE Bearing	WORN - 6326 M C4 INSULATED	REPLACED	Accepted		
10	DE Grease Nipple	Good	Cleaned	Accepted		
11	NDE Grease Nipple	DAMAGED	REPLACED	Accepted		
12	Motor shaft	Good	Cleaned	Accepted		
13	Fan & Clearance	N/A	N/A	N/A		
14	Fan Cover	N/A	N/A	N/A		
15	Cooling fan	N/A	N/A	N/A		
16	Terminal Box	Good	Cleaned	Accepted		
17	Terminal Lid	Good	Cleaned	Accepted		
18	Terminal Gasket	N/A	N/A	N/A		
19	Terminal Block	Good	N/A	N/A		
20	Cable Entry	Good	Cleaned	Accepted		
21	Cable Gland	DAMAGED	REPLACED	Accepted		
22	Stator Core	Good	Cleaned	Accepted		
23	Rotor Core	Good	Cleaned	Accepted		
24						
25	Fixing Bolts & Nuts	RUSTY	REPLACED	Accepted		
26	Lifting Device	Good	Cleaned	Accepted		
27	Threads	Good	Cleaned	Accepted		
28	Terminal Box-Heaters	N/A	N/A	N/A		
29	Heaters	FAULTY	REPLACED	Accepted		
30	Terminal Box for RTD	Good	Cleaned	Accepted		
31	RTD's	OK	OK	Accepted		
32	Aux. Terminal Box	N/A	N/A	N/A		
33	Fan cover probe (UL)	N/A	N/A	N/A		
34						
35						
36						
37						
General Remarks :						
Checked By		Inspected By		Responsible Person		Remarks
Company	WWPS	Company	WWPS	Company	WWPS	
Sign		Sign		Sign		
Name	Cypriano	Name	RAJESH	Name	W.LAING	
Date	15.02.13	Date	16.02.13	Date	16.02.13	



Dismantle Drawing Ex d, Ex e, Ex n:

Defects or recovery work: mark the position of the defect on the drawing and describe in relation to the top or some other identifiable feature or mark



Checked By		Inspected By		Responsible Person		Remarks
Company	WWPS	Company	WWPS	Company	WWPS	
Sign		Sign		Sign		
Name		Name		Name		
Date		Date		Date		



ROTOR STRAIGHTNESS CHECK



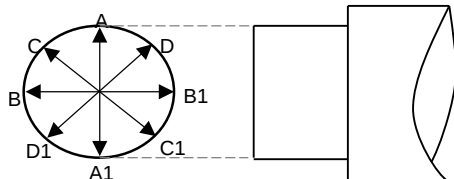
- BEARING AREA

A	B	C	D	E	F
0.03	0.00	0.03	0.03	0.01	0.03

ROTOR SHAFT DIMENSION (Bearing Area)

DRIVE END

MIN .DIAMETER : 150.043
MAX.DIAMETER : 150.068



BEFORE:

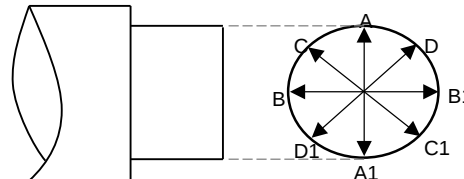
A-A1	B-B1	C-C1	D-D1
150.050	150.050	150.050	150.050

AFTER:

A-A1	B-B1	C-C1	D-D1
N/A	N/A	N/A	N/A

NON DRIVE END

MIN .DIAMETER : 130.027
MAX. DIAMETER : 130.052



BEFORE:

A-A1	B-B1	C-C1	D-D1
130.040	130.040	130.040	130.040

AFTER:

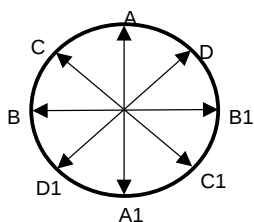
A-A1	B-B1	C-C1	D-D1
N/A	N/A	N/A	N/A

Remark :- Tolerance to EASA AR100 - 2010 - Section 2.13 & 2.14
Both Bearing Journals are in Tolerance

BEARING HOUSING DIMENSION

DRIVE END

MIN .DIAMETER : 319.960
MAX. DIAMETER : 320.017



BEFORE :

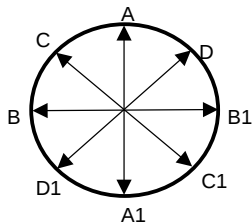
A-A1	B-B1	C-C1	D-D1
320.025	320.020	320.025	320.020

AFTER :

A-A1	B-B1	C-C1	D-D1
N/A	N/A	N/A	N/A

NON DRIVE END

MIN .DIAMETER : 279.964
MAX. DIAMETER : 280.016



BEFORE :

A-A1	B-B1	C-C1	D-D1
280.020	280.025	280.020	280.025

AFTER :

A-A1	B-B1	C-C1	D-D1
N/A	N/A	N/A	N/A

Remarks :- Both Bearing Housings are in tolerance

Checked By		Inspected By		Remarks
Company	WWPS	Company	WWPS	
Sign		Sign		
Name	STEPHEN	Name	RAJESH	
Date	19.08.13	Date	19.08.13	



Inspection Checklist Group II (non mining): Ex e (increased safety), Ex N / nA (non sparking), Ex p			
Component	Remarks	Instructions	Compliance after repair
Motor frame	Good	Clean	Accepted
Endshield DE	Good	Clean	Accepted
Endshield NDE	Good	Clean	Accepted
Bearing cap DE	Good	Clean	Accepted
Bearing cap NDE	Good	Replace	Accepted
Bearing DE	Worn	Replace	Accepted
Bearing NDE	Worn	Replace	Accepted
Verify to standard	Yes	Yes	Accepted
Fan cover	N/A	N/A	N/A
Terminal box:	Good	Clean	N/A
Terminal box lid	Good	Clean	N/A
Terminal gaskets	Good	Renew to maintain min IP54	N/A
No sharp edges on terminals	N/A	N/A	N/A
Studs & nuts same material	Good	Clean	Accepted
No sharp edges on terminals	Good	Clean	Accepted
Conductors tight in locations	Good	Clean	Accepted
Clearances between bare cdt's to std	Good	Clean	Accepted
Barriers to spec/standard	N/A	N/A	N/A
Correct fixings to cust'r's cables	N/A	N/A	N/A
Cable entry	Good	Clean	Accepted
Gland(s)	DAMAGED	Replace	Accepted
Stator core	Good	Clean	Accepted
Rotor core	Good	Clean	Accepted
Mountings			
Feet	Good	Clean	Accepted
Flange	N/A	N/A	N/A
Fixing bolts & threads	Rusty	Replace	Accepted
Lifting facilities & threads	Good	Clean	Accepted
arrangements	N/A	N/A	N/A
Ancillaries	Good	Clean	Accepted
Stator / Rotor airgap measurement	Good	Clean	Accepted
Surface finish & painting	Rusty	Clean	Accepted
Ex p only: protective gas leakage	N/A	N/A	N/A
Other			
General remarks:			
Drawings: For equipment of special design configurations, please complete a sketch using extra pages as required. Show dimensions, calculated gaps, max/min permissible gaps, pass / fail.-see pg 9			

Checked By		Witness By		Responsible Person		Remarks
Company	WWPS	Company	WWPS	Company	WWPS	
Sign		Sign		Sign		
Name	RAJESH	Name	RAJESH	Name	W.LAING	
Date	19.08.13	Name	19.08.13	Date	19.08.13	



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Manufacturer	GE		kW /HP	1150 HP	Order No.	54693		
Serial No:	V V 06050019		Volts	587	Frame	112 M IEC		
Ex Type	Exe		Amp	1120	IP Rating	44 [open]		
Protection Type:	Ex d	Ex de	Ex p	Ex N	RPM	800		
Year of Manu	1996	Standard	IEC	BSUL	ATEX	Temp Rating	T3	
Motor Class	I	Gas Group	A	B	C	D	Category	1
	II		D	E	F	G		2
Certificate Number	01 ATEX 3196 X							
Other Details								

Final Test Results

Insulation Resistance		Volts	500
Phase to Earth		Value	
U1 - E	2000	MΩ	
V1 - E	2000	MΩ	
W1 - E	2000	MΩ	

INSULATION RESISTANCE		Volts	
Phase To Phase		Value	
U1 - V1	N/A	MΩ	
V1 - W1	N/A	MΩ	
W1 - U1	N/A	MΩ	

Winding Resistance :		Amb	35 °C
Phase To Phase		Value	
U1 - U2	0,0108	Ω	
V1 - V2	0,0108	Ω	
W1 - W2	0,0108	Ω	

Temperature Detectors:		Ambiant	35
12	113.6	Ω	

No Load Test Run			
Voltage		550	
Phase		Current	
L1	246,9	Amps	
L2	2467,7	Amps	
L3	238,8	Amps	
RPM		999 @ 50HZ	

Locked Rotor Test - 100 volts		
Phase	Current	
L1	718.1	Amps
L2	723.0	Amps
L3	704.0	Amps

Vibration				
Drive End			Non Drive end	
Horizontal	0.454	mm/sec	1.02	mm/s
Vertical	1.29	mm/sec	1.65	mm/s
Axial	1.141	mm/sec	1.37	mm/s

Final Hi-Pot	
Voltage	3761

PASS	0.8ma
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Date: 04.03.13



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WWPS Job No. DW 11517

Work Done	Yes	No	Parts Required / Fitted	Yes	NO
Collect Unit		NO	Supply new cooling fan		NO
Dismantle, Inspect & Test	Yes		Supply new fan cover		NO
Strip Stator		NO	Supply new V ring Seal	Yes	
Strip Rotor		NO	Supply new oil seals x		NO
Clean core & Slots		NO	Supply new O ring		NO
Carry out core Flux test	Yes		Supply new mechanical seal		NO
Rewind stator /rotor to Class "F"		NO	Supply new thermistors		NO
Rewind stator /rotor to Class "H"		NO	Supply new RTD's		NO
Steam Clean stator & Revarnish	Yes		Supply new Terminal Block		NO
Supply and fit new leads	Yes		Supply new Terminal Box		NO
Supply and fit new DE Bearing	Yes		Supply new Terminal Box Lid		NO
Supply and fit new NDE Bearing	Yes		Record Flame Path Dimensions	Yes	
Assemble	Yes		Fit new Certified Eye Bolt		NO
Test	Yes				
	Yes				
Paint	Yes				
Deliver		NO			
Grit Blast to SA 2.5	Yes				
Sleeve DE Bearing Housing		NO			
Sleeve NDE Bearing Housing		NO			
Weld & Machine DE Bearing Journal		NO			
Weld & Machine DE Bearing Journal		NO			
Dynamically Balance	Yes				



Detailed record of work carried out:			
Parts replaced:			
Parts reclaimed:			
Other work done: * Lock Rotor test result - (R = 718.1 Amps, Y = 723.0 Amps, B = 704.0 Amps) - Acceptable			
Identification mark affixed to motor:			
R (Repair to Certificate & Standard) OR R (Repair to Standard, but not in compliance with certificate)			
We confirm that all machined surfaces & mating joints have been cleaned re-inspected prior to assembly for abrasions, pitting, rusting, flaws & other surface damage which might invalidate the original certification . No alterations affecting the original protection code have been made. Only authorised replacement parts have been used. All recovery work which has been identified in this report has been carried out and subjected to the necessary tests and inspections in accordance with IEC 60079-19: 2006 / UL 674. _____ We confirm that we have made no changes to this Ex apparatus during the repair which would invalidate compliance with the standard to which it was certified.			
Checked By		Responsible Person	
Company	WWPS	Company	WWPS
Sign		Sign	
Name	RAJESH	Name	W.LAING
Date	26.08.13	Date	26.08.13



EQUIPMENT FOR CALIBRATION & CERTIFICATION

WWPS No.	DESCRIPTION	MAKE	SERIAL NO	CERT. NO	CALIB. DATE	DUE DATE
TE-18	AC/DC DIGITAL CLAMP METER	Fluke	20300329	HAATC22388	10/07/2013	09/07/2014
TE-30	DIGITAL MULTIMETER	Fluke	89510114	16928	07/09/2013	07/08/2014
TE-35	DIGITAL TACHOMETER	Unitest	511067	16867	23/6/2013	22/6/2014
SG-10	GO-NO-GO GAUGE - 7/16"	TWT	162	GCLC/2013-2308-07	05/05/2013	04/05/2014
SG-11	GO-NO-GO GAUGE - 5/8"	TWT	163	GCLC/2013-2091-05	22/4/2012	21/4/2014
SG 13	GO-NO-GO GAUGE - 1/2"	JLS Supplies Ltd	74254	GCLC/2013-2091-04	23/4/2013	22/4/2014
M-12	OUTSIDE MICROMETER	Mitutoyo	26002108	17037	08/11/2013	08/10/2014
V-15	VERNIER CALIPER	Mitutoyo	12007123	GCLC/2013-2591-01	18/5/2013	17/5/2014
M-13	INSIDE MICROMETER	Mitutoyo	2002147	GCLC/2013-3158-02	06/10/2013	06/09/2014
TE-66	TEMPERATURE PROBE	Fluke	12570008	16643	05/08/2013	05/07/2014
TE-31	DIGITAL MEGOHMMETER	Fluke	91170004	16754	27/5/2013	26/5/2014
TE-40	DC HIPOT TESTER	Hipotronics	P0807659	01 - C190679	13/8/2013	08/12/2014

**World Wide Power Services FZCO**

PO Box 18088, Jebel Ali, Dubai

United Arab Emirates

Telephone + 971 4 886 1155

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DW 11517

Replacement Parts Required					Job No.	DW11517	
Sr. №	Description	Part №	Qty	Comment	LPO No.	Date	Signed
1	ROLLER BEARING	558830 - C	1	DE	STOCK	20.08.13	FRANCIS
2	BALL BEARING	6326 - M C4	1	NDE INSULATED	"	"	"
3	HEX BOLTS DRILLED	5/8" X 3 1/2"	8	DE FRONT PLATE	"	"	"
4	646 CABLE		18 mtrs	FRAME	"	"	"
5	V SEAL	V150			"	"	"
6	LOCK WIRE	0.5mm	15mtrs	FRAME	"	"	"
7	LOCK WIRE	1.5	5mtrs	"	"	"	"
8	CRIMPS		3	"	"	"	"
9	GLANDS		3	"	"	"	"
10							
11							
12							
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32							



World Wide Power Services FZCO

Balancing Certificate

Date : 25/08/2013 16:14:59	
M/C Description:	CEMB ZB4500/TC/GV - S/Number: 103941
Prog. N^ 411	Tag No. DW 11517 AC ROTOR
Governing specifications	ISO 1940 - Quality grade G = 1.00 Weight: 900.00 Kg - Service speed: 800 RPM

	Tol (g)	r (mm)	Dim (mm)	
P1	41.319	130.00	a	140.00
ST	82.638	130.00	b	610.00
P2	41.319	130.00	c	270.00
Correction of mass unbalance: [] Add / [] Remove				

Initial unbalances:

P1 (g)	ST (g)	P2 (g)
102.70	316.95	223.81
312.5°	291.9°	282.6°

Residual unbalances:

P1 (g)	ST (g)	P2 (g)
4.1	4.0	3.2
264.2°	311.0°	18.4°

Measuring speed = 801 rpm

Tested By : _____ Approved By : _____

Note: _____

PO Box 18088
Jebel Ali
Dubai



Telephone + 971 4 886 1155
Facsimile + 971 886 1144



