

TEST REPORT FOR ASYNCHRONOUS MOTORS

Work no 348284	Machine Type RNCC450LB2B3	Serial no 348284
Plant Pratola Serra (AV) Customer FCA Italy Customer ref		

Rev	Date	Description	Prepared by	Approved by
A	29/01/2016	First Revision	ITDALOC	Guido Vajna



ABB S.p.A – Discrete Automation and Motion Division

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Guido Vajna

Test date 29/01/2016	Inspector
Production unit Motors and Generators, Vittuone, Italy	

MOTOR DATA PLATE

Power (kW): 1050	Stator Voltage (V): 6000	Stator Current (A): 115,8
Stator Conn. (S/T) : STAR	Frequency (Hz): 50	Rotation (Direction): Anticlockwise
Stator Insulation Class: F	Overtemperature (°C): 75	Service: S1
Power Factor: 0,91	Rpm: 2969	Ambient Temperature (°C): 45
IP Protection: W44	Weight: 3475	Rotor Number: 24368

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1) INSULATION RESISTANCE

Operator: ITDALOC Test file: WCS1R.ABB

Temperature (°C): 22,5

	MOhm	Megger at Vdc
STATOR 1	1000,0	5000,0

2) STATOR RESISTANCES

Operator: ITDALOC Test file: ACS1R.ABB

RESISTANCES

WINDING

	Ohm
Mean UV	0,558264
Mean UW	0,558837
Mean VW	0,560298
Mean Phase Star at 22,2 °C.	0,279566
CARRIED RESISTANCE: Mean at 25 °C	0,282653

TEMPERATURE MEASUREMENT

STATOR:

thermoelements PT 100 Ohm at 0°C type.

	1	2	3	4	5	6
Ohm	108,6	108,6	108,6	108,4	108,5	108,5
°C	22,3	22,3	22,3	21,8	22,1	22,1

Mean Stator Temperature: Star at 22,2 °C.

BEARINGS:

DE1 thermoelements PT 100 Ohm at 0°C type.

	DE 1-1
Ohm	108,3
°C	21,6

NDE1 thermoelements PT 100 Ohm at 0°C type.

	NDE 1-1
Ohm	108,4
°C	21,8

3) NO LOAD

Operator: ITDALOC Test file: DCS1R.ABB

ACQUIRED DATA

Voltage (V)	Current (A)	Power 1 (W)	Power 2 (W)	Total Power (W)	Cos fi	V ² E-4
6599,3	35,95	129187,8	-107633,5	21554,3	0,052	4355,1
6023,1	26,52	88588,7	-70737,4	17851,2	0,065	3627,8
5697,9	23,18	73803,1	-57909,4	15893,7	0,069	3246,6
5435,5	20,91	64086,6	-49205,6	14881,0	0,076	2954,5
3588,4	11,89	26396,4	-15805,2	10591,2	0,143	1287,7
3069,6	10,13	20216,5	-10343,6	9872,9	0,183	942,2
2402,5	8,08	13969,0	-4685,6	9283,4	0,276	577,2
1800,8	6,50	9777,4	-676,6	9100,7	0,449	324,3

Current 1 (A)	Current 2 (A)	Current 3 (A)	Diff %
36,33	36,59	34,94	4,74
26,84	27,08	25,64	5,65
23,48	23,71	22,36	6,04
21,19	21,41	20,14	6,32
12,04	12,23	11,39	7,38
10,24	10,44	9,71	7,46
8,14	8,34	7,76	7,46
6,50	6,72	6,28	7,09

TEMPERATURE MEASUREMENT

STATOR:

thermoelements PT 100 Ohm at 0°C type.

	1	2	3	4	5	6
Ohm	124,4	125,0	124,7	124,3	124,8	124,7
°C	63,4	64,9	64,1	63,1	64,4	64,1

Mean Stator Temperature: 64,0 °C

BEARINGS:

DE1 thermoelements PT 100 Ohm at 0°C type.

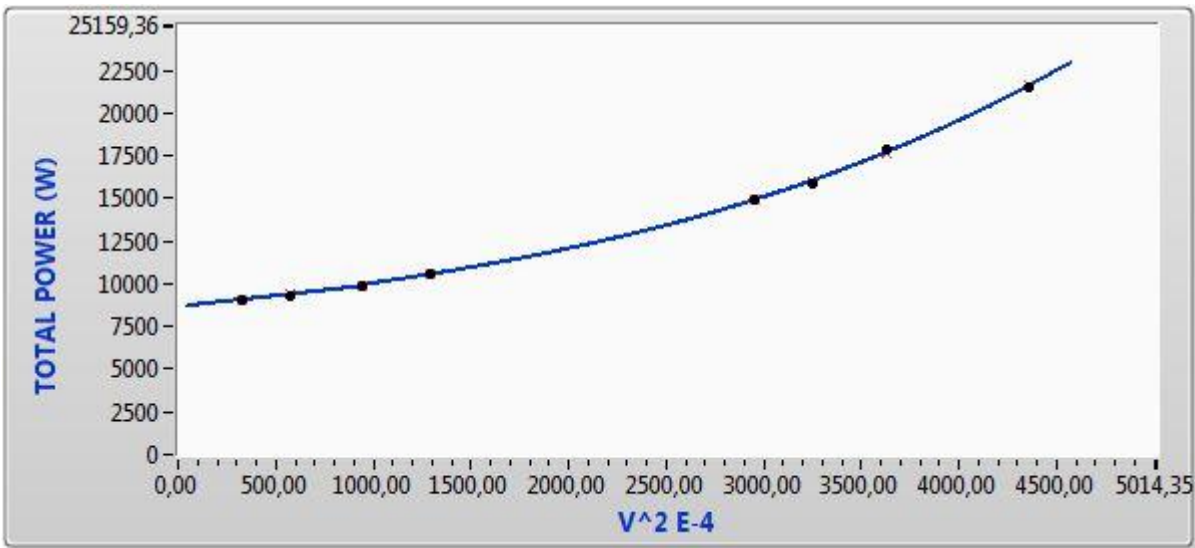
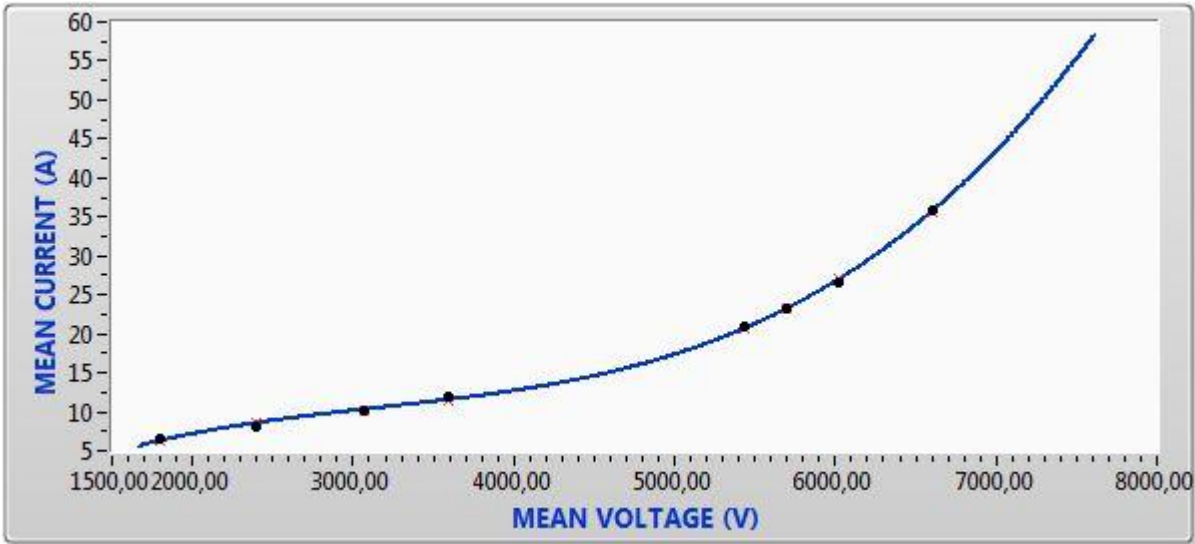
	DE 1-1
Ohm	125,7
°C	66,7

NDE1 thermoelements PT 100 Ohm at 0°C type.

	NDE 1-1
Ohm	118,9
°C	49,1

RESULTS

Nominal Voltage (V)	Frequency (Hz)	Resistance 25°C (Ohm)
6000	50,0	0,282653



LOSSES SEPARATION

No Load Current (A)	Copper Losses (W)	Fric. Wind. Losses (W)	Iron Losses (W)	Total Losses (W)	Cos fi
26,73	696,7	8635,2	8191,0	17557,1	0,062

4) VIBRATIONS

Operator: ITDALOC Test file: GCS1R.ABB

Frequency (Hz): 50,0
Voltage (V): 6000

Motor type: HORIZONTAL
Motor Conditions:
Rigid mounting
No load condition

Measure with velocimeter/accelerometer.
Measurement Unit: mm/s
Unit Expression: rms

Horizontal DE: 0,84	Horizontal NDE: 0,41
Vertical DE: 0,37	Vertical NDE: 0,99
Axial DE: 0,34	Axial NDE: 0,42

5) SHORT CIRCUIT

Operator: ITDALOC Test file: ECS1N.ABB
Frequency: 50,0 Hz.

ACQUIRED DATA

Voltage (V)	Current (A)	Power 1 (W)	Power 2 (W)	Total Power (W)	Cos Fi
1959,8	201,10	258238,8	-128523,8	129714,9	0,190
1460,0	150,86	145048,3	-70914,8	74133,5	0,194
1011,2	104,33	69464,4	-33986,2	35478,2	0,194

Current 1 (A)	Current 2 (A)	Current 3 (A)	Diff %
201,53	201,00	200,78	0,37
151,09	150,79	150,70	0,26
104,53	104,27	104,20	0,31

6) INSULATION RESISTANCE

Operator: ITDALOC Test file: WCS1R.ABB

Insulation resistance before and after high voltage test

Temperature (°C): 55,0

	MOhm	Megger at Vdc
STATOR 1	1000,0	5000,0
STATOR RTD'S	1000,0	500,0
BEARINGS RTD'S	1000,0	500,0

7) MEASURING INSTRUMENTS

INVENTORY #	SERIAL #	MODEL	DESCRIPTION	CALIBRATION EXPIRY
42625	101366587	BM15	INSULATION TESTER	30/07/2016
41173	1528007	8845A	MULTIMETER	31/01/2016
41183	2322010	8845A	MULTIMETER	29/02/2016
42383	SG44001226	34970A	CONTROL	30/06/2017
			THERMOCOUPLES	
40820	2375656		SHUNT	31/10/2018
40027	A4607 05018	D 5255M	WATTMETER	31/01/2017
41998	343090301	VKM 24/2/H	VOLTAGE TRANSF.	30/09/2018
41999	343090302	VKM 24/2/H	VOLTAGE TRANSF.	30/09/2018
42139	353170301	SKG 24	CURRENT TRANSF.	31/07/2016
42140	353170302	SKG 24	CURRENT TRANSF.	31/07/2016
42546	34184	N500	VIBROMETER	30/11/2016
40034	TN92779BA	4000	WATTMETER	29/02/2016

8) REMARKS