

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

NAMEPLATE DATA	IEC	TYPE	4	KW	2860	RPM
AK112M-2 FRAME	3	PHASE	400	VOLTS	50	HZ/CYCLES
85.5 EFFICIENCY	7.42	AMPS	55	IP	IC01	IC
2 POLE	S1	DUTY	0.91	PF	N/A	EFF2
VALIADIS MANUFACTURER		SERIAL NO.	F	INS. CLASS	DELTA	CONNECTION

MAJOR CONTENTS	UNIT	TEST VALUE
STATOR RESISTANCE OF PHASE TO PHASE	75 DEG.C	OHM 3.8215
NO LOAD CURRENT		AMP 1.98
NO LOAD INPUT		kW 0.1725
CORE LOSS (Pfe)		kW 0.087
WINDAGE FRICTION LOSS (Pfw)		kW 0.065
STATOR WINDING LOSS(Pcu1)		kW 0.3055
ROTOR WINDING LOSS(Pcu2)		kW 0.1972
STRAY LOAD LOSS (Ps)		kW 0.0234
FULL LOAD CURRENT		AMP 7.3
LOCKED ROTOR CURRENT		AMP 50.15
LOCKED ROTOR CURRENT/FULL LOAD CURRENT		P.U. 6.9
LOCKED ROTOR INPUT @ 100% VOLT		kW 23.41
FULL LOAD TORQUE		N.m. 13.35
LOCKED ROTOR TORQUE		N.m. 27.73
LOCKED ROTOR TORQUE/FULL LOAD TORQUE		P.U. 2.08
PULL OUT TORQUE		N.m. 45.85
PULL OUT TORQUE/FULL LOAD TORQUE		P.U. 3.43
PULL UP TORQUE		N.m. 21.56
PULL UP TORQUE/FULL LOAD TORQUE		P.U. 1.62
EFFICIENCY @ FULL LOAD		% 85.51
POWER FACTOR @ FULL LOAD		0.925
FULL LOAD SLIP		4.60%
FULL LOAD SPEED		r/min 2862
STATOR WINDING TEMPERATURE RISE	30 SECS	K 68.5
DE BEARING TEMPERATURE BY PT100		Deg. C 58.0
NDE BEARING TEMPERATURE BY PT100		Deg. C 56.0
TEMPERATURE ON LEADS BY PT100		Deg. C
TEMPERATURE IN TERMINAL BOX BY PT100		Deg. C
AMBIENT TEMPERATURE BY PT100		Deg. C
SOUND PRESSURE LEVEL		dB (A) 65.2
VIBRATION		mm/s 0.6
MOMENT OF INERTIA		kgm ² 0.0095
WEIGHT		kg 29

The data above is calculated as per IEC 34-2 , all data at nominal Volts

VALIADIS S.A.				SCALE	N/A		
				DATE		REV	
4 kW 400 VOLTS 50 Hz				DRAWN		DOCUMENT NO.	
				APPRVD			
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TEST DATA	NO LOAD	25% LOAD	50% LOAD	75% LOAD	100% LOAD	125% LOAD	LOCKED ROTOR
EFFICIENCY	0	82.3	86.8	86.9	85.5	83.2	
PF	0.126	0.619	0.826	0.901	0.925	0.936	0.674
RPM	3000	2974	2934	2900	2862	2815	0
SLIP	0.00%	0.87%	2.20%	3.33%	4.60%	6.17%	100.00%
AMPS	1.98	2.79	4	5.51	7.3	9.31	50.15
VOLTS	400	400	400	400	400	400	400
TORQUE NM	0	3.16	6.47	9.85	13.35	17.05	27.73
KW INPUT	0.1725	1.1964	2.29	3.4397	4.6785	6.04	23.41
KW OUTPUT	0	0.985	1.988	2.991	4.000	5.024	

LOSSES (kW)	25% LOAD	50% LOAD	75% LOAD	100% LOAD	125% LOAD
STATOR LOSS Pcu1	0.045	0.092	0.174	0.305	0.497
STATOR LOSS %	3.73%	4.01%	5.06%	6.53%	2.12%
ROTOR LOSS Pcu2	0.009	0.046	0.106	0.197	0.336
ROTOR LOSS %	0.77%	2.03%	3.08%	4.21%	1.44%
CORE LOSS Pfe	0.087	0.087	0.087	0.087	0.087
CORE LOSS %	7.27%	3.80%	2.53%	1.86%	0.37%
WINDGE/FRICTION Pfw	0.065	0.065	0.065	0.065	0.065
WINDGE/FRICTION %	5.43%	2.84%	1.89%	1.39%	0.28%
STRAY LOAD LOSS Ps	0.006	0.011	0.017	0.023	0.030
STRAY LOAD LOSS %	0.50%	0.50%	0.50%	0.50%	0.50%

Losses are measured/calculated as per IEC 34-2-The Summation of Losses Method
 All data is measured at Nominal Volts

TEMPERATURES

STATOR RESISTANCE COLD	3.199 OHMS @	24.5	DEG.C.	BETWEEN STATOR LEADS
STATOR RESISTANCE ADJUSTED	3.8215 OHMS @	75	DEG.C.	BETWEEN STATOR LEADS
STATOR RESISTANCE HOT	4.056 OHMS	after test of temp rise		BETWEEN STATOR LEADS
WINDING TEMPERATURE RISE	68.5 DEG.C.	at full load steady state at		30 SECS
WINDING TEMPERATURE RISE	DEG.C.	at full load steady state at		0 SECS
PT100 TEMPERATURE OF DE WINDING	DEG.C.	at full load steady state at ambient		DEG.C.
PT100 TEMPERATURE OF NDE WINDING	DEG.C.	at full load steady state at ambient		DEG.C.
PT100 TEMPERATURE OF DE BEARING	58.0 DEG.C.	at full load steady state at ambient		25.5 DEG.C.
PT100 TEMPERATURE OF NDE BEARING	56.0 DEG.C.	at full load steady state at ambient		25.5 DEG.C.
PT100 TEMPERATURE OF IN TERMINAL BOX	DEG.C.	at full load steady state at ambient		DEG.C.
PT100 TEMPERATURE OF ON STATOR LEAD	DEG.C.	at full load steady state at ambient		DEG.C.

OTHER

NOISE LEVEL (Lp)	65.2	dB(A) 1meter	INSULATION RESISTANCE	500	MEG.OHMS
VIBRATION LEVEL	0.6	mm/sec on no load	D.E. BEARING		
WEIGHT	29	kg	N.D.E. BEARING		
H-POT TEST VOLTS	1800	VOLTS			

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			DATE		REV
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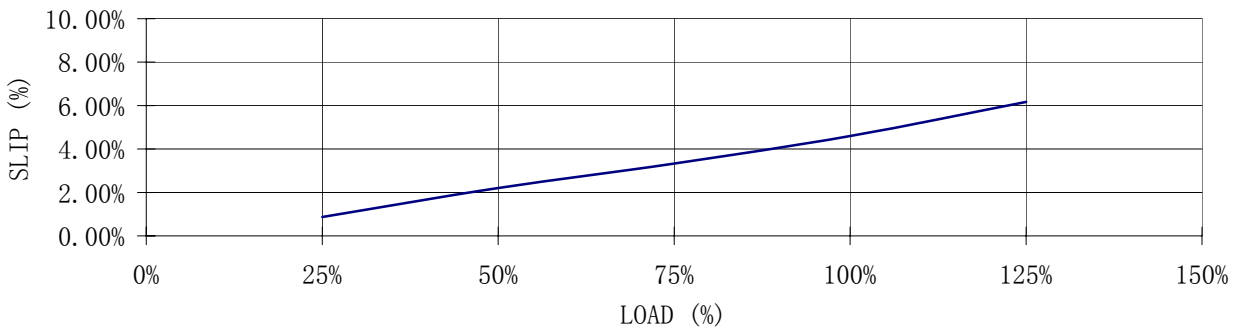
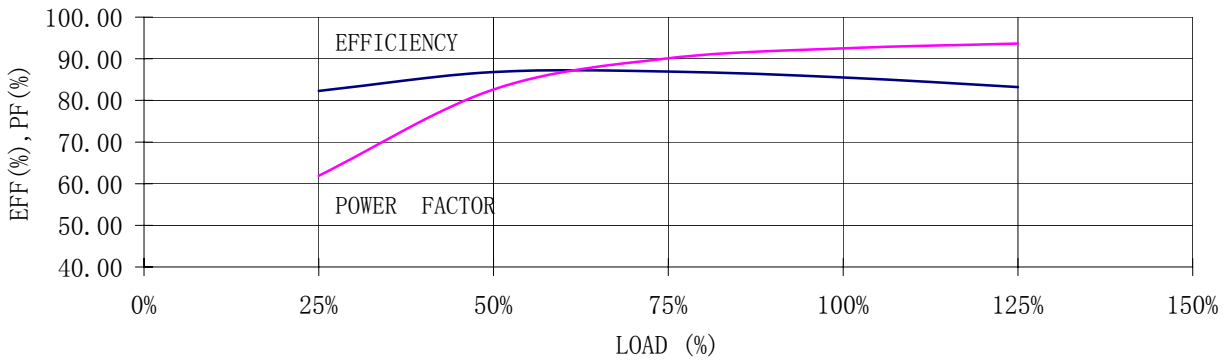
RESULT SUMMARY

VALIADIS S.A.

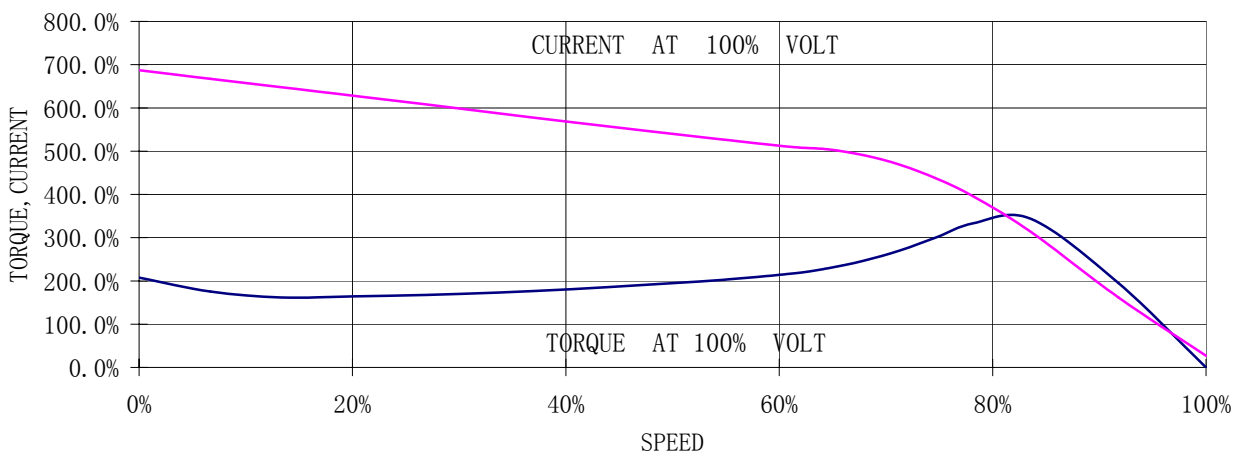
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LOAD TEST



SPEED VS TORQUE, CURRENT



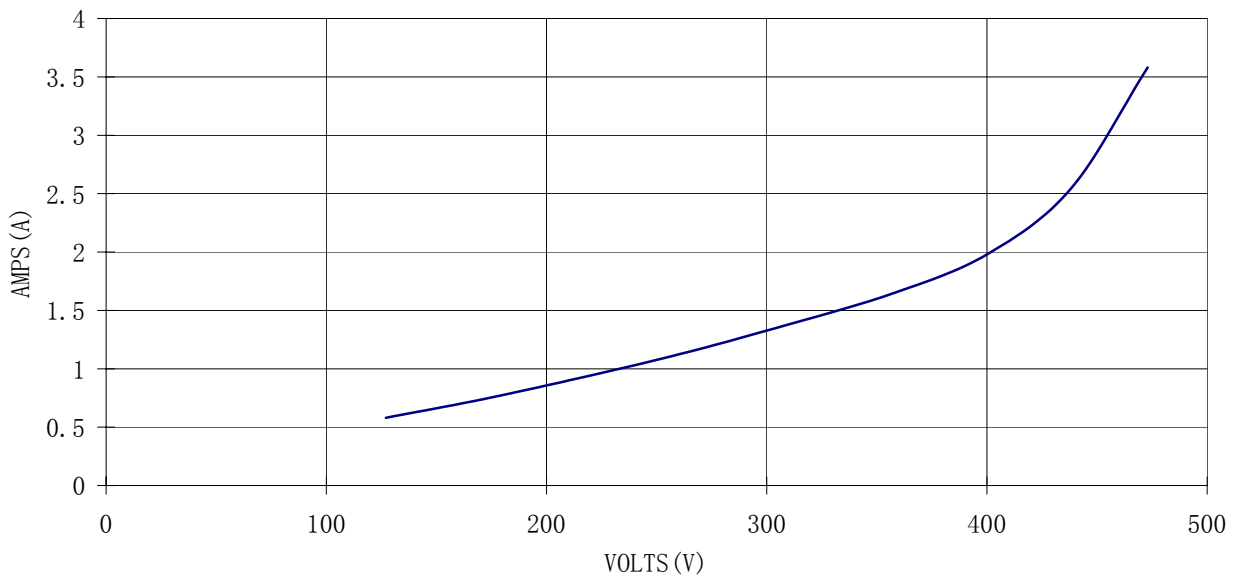
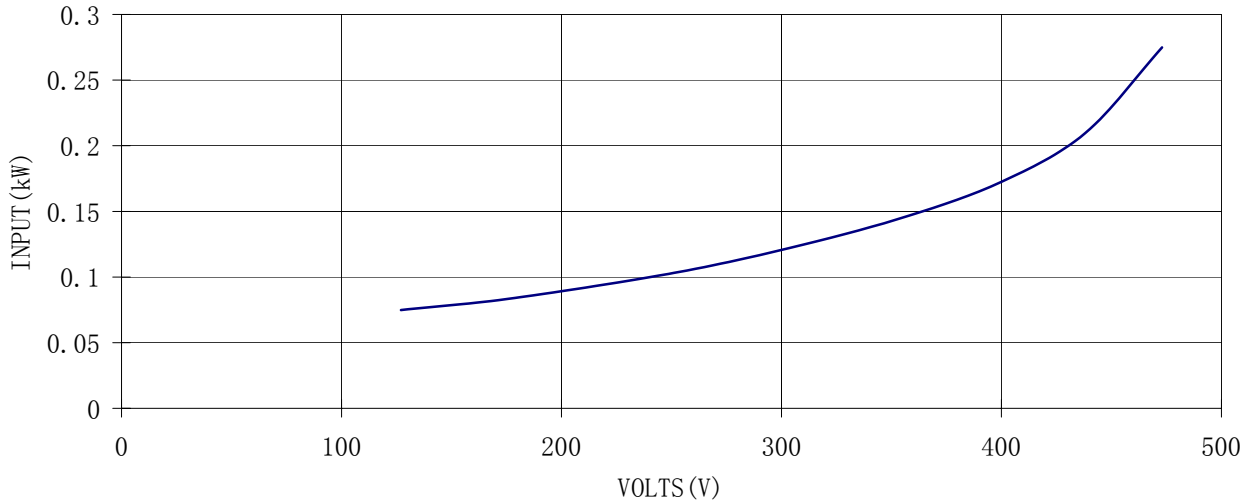
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	AK112M-2	DRAWN		DOCUMENT NO.
	4	APPRVD		
400 VOLTS 50 Hz	CHECKED			

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	4	kW		APPRVD		
400	VOLTS	50	CHECKED			

CURVE