

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

NAMEPLATE DATA	IEC	TYPE	1.5	KW	1410	RPM
AK90L - 4 FRAME	3	PHASE	400	VOLTS	50	HZ/CYCLES
79.0 EFFICIENCY	3.47	AMPS	55	IP	IC01	IC
4 POLE	S1	DUTY	0.79	PF	N/A	EFF2
VALIADIS MANUFACTURER		SERIAL NO.	F	INS. CLASS	Y	CONNECTION

MAJOR CONTENTS	UNIT	TEST VALUE
STATOR RESISTANCE OF PHASE TO PHASE	75 DEG.C	OHM 9.2064
NO LOAD CURRENT		AMP 2.20
NO LOAD INPUT		kW 0.191
CORE LOSS (Pfe)		kW 0.114
WINDAGE FRICTION LOSS (Pfw)		kW 0.012
STATOR WINDING LOSS(Pcu1)		kW 0.1663
ROTOR WINDING LOSS(Pcu2)		kW 0.0946
STRAY LOAD LOSS (Ps)		kW 0.0095
FULL LOAD CURRENT		AMP 3.47
LOCKED ROTOR CURRENT		AMP 21.14
LOCKED ROTOR CURRENT/FULL LOAD CURRENT		P.U. 6.1
LOCKED ROTOR INPUT @ 100% VOLT		kW 10.309
FULL LOAD TORQUE		N.m. 10.12
LOCKED ROTOR TORQUE		N.m. 32.24
LOCKED ROTOR TORQUE/FULL LOAD TORQUE		P.U. 3.19
PULL OUT TORQUE		N.m. 31.99
PULL OUT TORQUE/FULL LOAD TORQUE		P.U. 3.16
PULL UP TORQUE		N.m. 18.83
PULL UP TORQUE/FULL LOAD TORQUE		P.U. 1.86
EFFICIENCY @ FULL LOAD		% 79.06
POWER FACTOR @ FULL LOAD		0.787
FULL LOAD SLIP		5.87%
FULL LOAD SPEED		r/min 1412
STATOR WINDING TEMPERATURE RISE	30 SECS	K 59.5
DE BEARING TEMPERATURE BY PT100		Deg. C 41.5
NDE BEARING TEMPERATURE BY PT100		Deg. C 38.5
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) 49
VIBRATION		mm/s 0.5
MOMENT OF INERTIA		kgm ² 0.0027
WEIGHT		kg 16

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

VALIADIS S.A.				SCALE	N/A		
				DATE		REV	
AK90L - 4 1.5 kW 400 VOLTS 50 Hz				DRAWN		DOCUMENT NO.	
				APPRVD			
				CHECKED			

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TEST DATA	NO LOAD	25% LOAD	50% LOAD	75% LOAD	100% LOAD	125% LOAD	LOCKED ROTOR
EFFICIENCY	0	65.1	75.7	78.8	79.1	77.5	
PF	0.125	0.377	0.569	0.701	0.787	0.837	0.704
RPM	1500	1480	1458	1437	1412	1379	0
SLIP	0.00%	1.33%	2.80%	4.20%	5.87%	8.07%	100.00%
AMPS	2.2	2.2	2.52	2.93	3.47	4.18	21.14
VOLTS	400	400	400	400	400	400	400
TORQUE NM	0	2.41	4.92	7.46	10.12	13.00	32.24
KW INPUT	0.191	0.5752	0.9927	1.4236	1.8923	2.4233	10.309
KW OUTPUT	0	0.374	0.752	1.122	1.496	1.877	

LOSSES (kW)	25% LOAD	50% LOAD	75% LOAD	100% LOAD	125% LOAD
STATOR LOSS Pcu1	0.067	0.088	0.119	0.166	0.241
STATOR LOSS %	11.62%	8.83%	8.33%	8.79%	2.34%
ROTOR LOSS Pcu2	0.005	0.022	0.050	0.095	0.167
ROTOR LOSS %	0.91%	2.23%	3.51%	5.00%	1.62%
CORE LOSS Pfe	0.114	0.114	0.114	0.114	0.114
CORE LOSS %	19.82%	11.48%	8.01%	6.02%	1.11%
WINDGE/FRICTION Pfw	0.012	0.012	0.012	0.012	0.012
WINDGE/FRICTION %	2.09%	1.21%	0.84%	0.63%	0.12%
STRAY LOAD LOSS Ps	0.003	0.005	0.007	0.009	0.012
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	7.60267 OHMS @	21.0	DEG.C.	BETWEEN STATOR LEADS
STATOR RESISTANCE ADJUSTED	9.2064 OHMS @	75	DEG.C.	BETWEEN STATOR LEADS
STATOR RESISTANCE HOT	9.31 OHMS	after test of temp rise		BETWEEN STATOR LEADS
WINDING TEMPERATURE RISE	59.5 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	41.5 DEG.C.	at full load steady state at ambient		19.0 DEG.C.
PT100 TEMPERATURE OF NDE BEARING	38.5 DEG.C.	at full load steady state at ambient		19.0 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)	49	dB(A) 1meter	INSULATION RESISTANCE	500	MEG.OHMS
VIBRATION LEVEL	0.5	mm/sec on no load	D.E. BEARING		
WEIGHT	16	kg	N.D.E. BEARING		
H-POT TEST VOLTS	1800	VOLTS			

VALIADIS S.A.			SCALE	N/A	
			DATE		REV
AK90L - 4			DRAWN		DOCUMENT NO.
			APPRVD		
			CHECKED		
1.5	400	VOLTS	50	Hz	

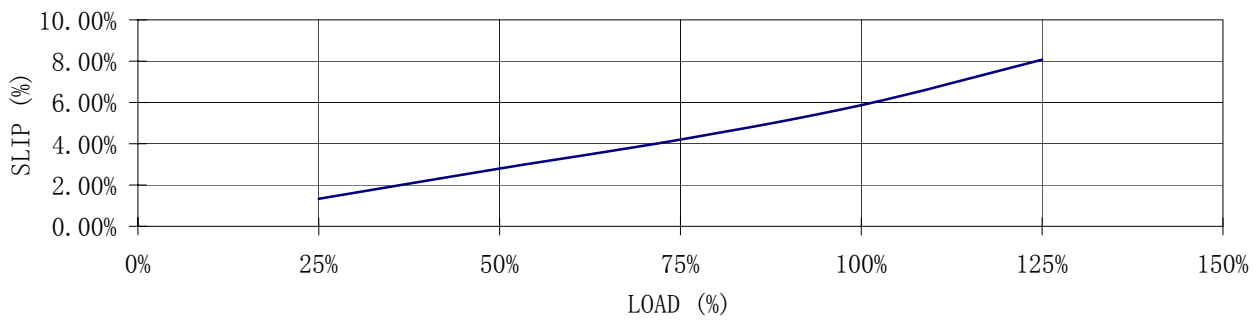
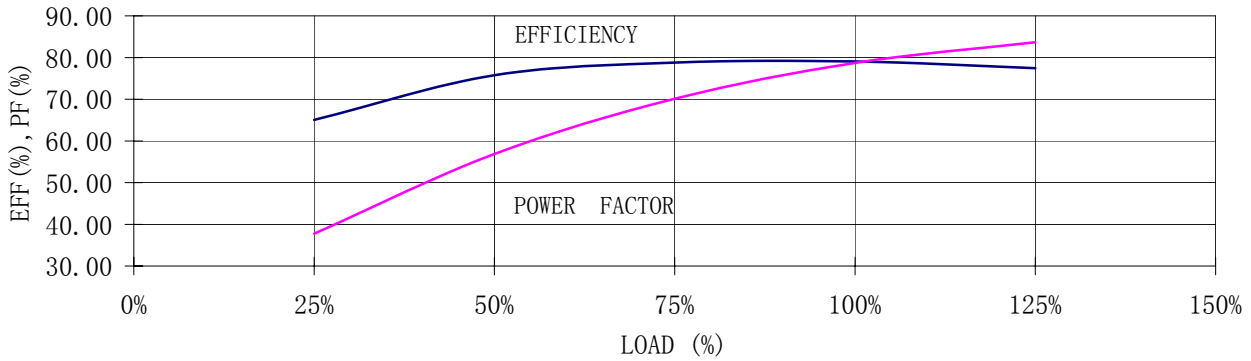
RESULT SUMMARY

VALIADIS S.A.

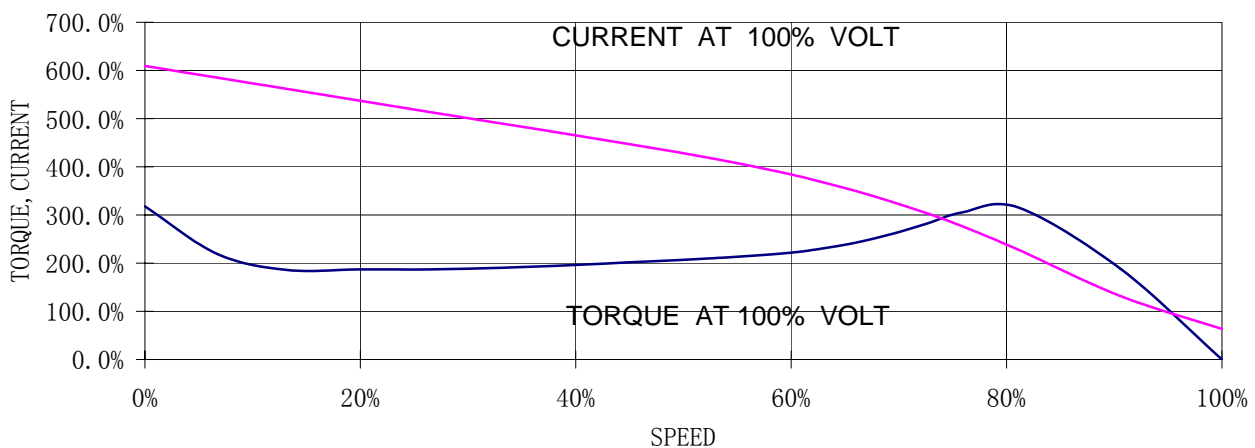
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LOAD TEST



SPEED VS TORQUE, CURRENT



VALIADIS S.A.	SCALE	N/A	
	DATE		REV
	AK90L - 4	DRAWN	DOCUMENT NO.
	1.5 kW	APPRVD	
400 VOLTS 50 Hz	CHECKED		

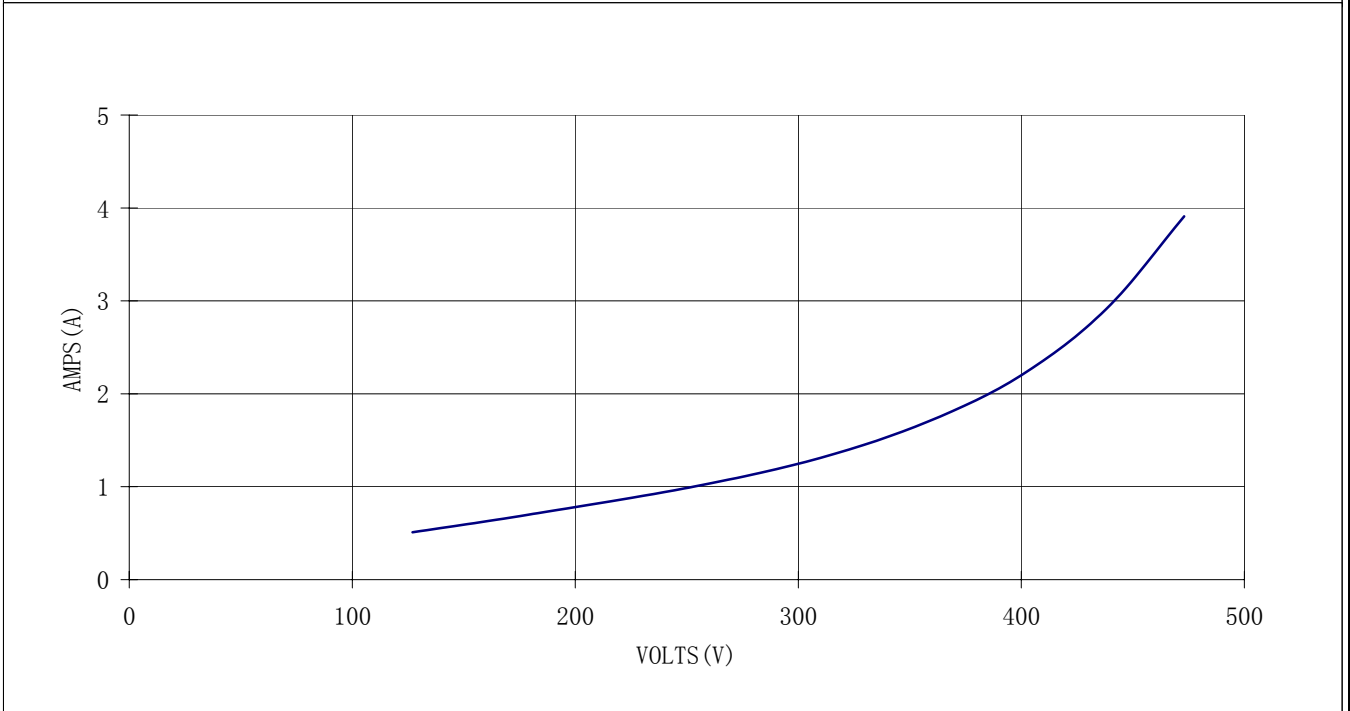
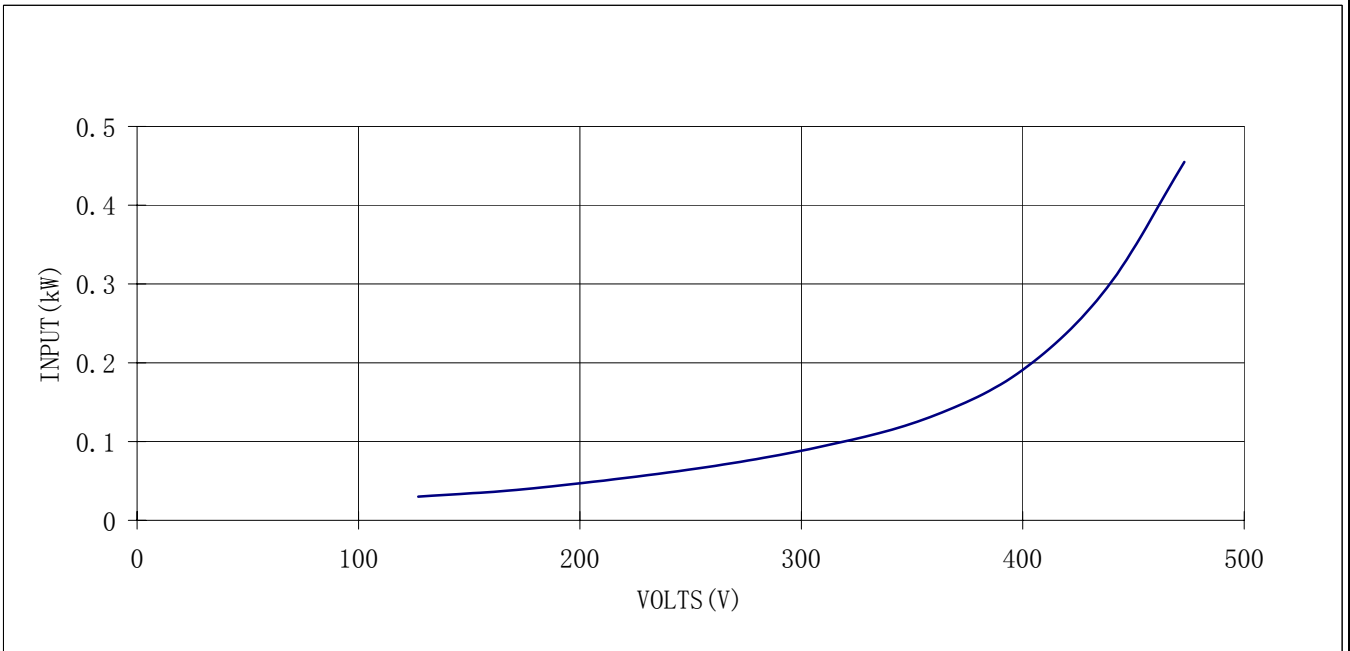
CURVE

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	1.5	kW		APPRVD		
400	VOLTS	50	CHECKED			

CURVE