

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

NAMEPLATE DATA		IEC TYPE		22 KW		2942 RPM		
K180M-2 FRAME		3 PHASE		400 VOLTS		50 HZ / CYCLES		
91.4 EFFICIENCY		39.0 AMPS		55 IP		IC411 IC		
2 POLE		S1 DUTY		0.892 PF		N/A EFF2		
VALIADIS MANUFACTURER		SERIAL NO.		F INS.CLASS		DELTA CONNECTION		

TEST DATA	NO LOAD	25% LOAD	50% LOAD	75% LOAD	100% LOAD	110% LOAD	125% LOAD	LOCKED ROTOR
	EFFICIENCY	0	83.03	88.92	91.03	91.39	91.36	91.25
PF	0.122	0.611	0.779	0.863	0.892	0.900	0.912	0.456
RPM	3000	2984	2971	2957	2942	2936	2927	0
SLIP	0.00%	0.53%	0.97%	1.42%	1.94%	2.14%	2.44%	100.00%
AMPS	11.65	15.64	22.92	30.32	38.96	42.50	47.71	295.5
VOLTS	400	400	400	400	400	400	400	400
TORQUE NM	0	17.6	35.4	53.3	71.5	78.8	89.8	221.5
KW INPUT	0.986	6.62	12.37	18.13	24.07	26.49	30.14	93.44
KW OUTPUT	0	5.50	11.00	16.50	22.00	24.20	27.50	

LOSSES(kw)	25% LOAD	50% LOAD	75% LOAD	100% LOAD	110% LOAD	125%LOAD
STATOR LOSS Pcu1	0.090	0.194	0.340	0.561	0.67	0.84
STATOR LOSS %	1.37%	1.57%	1.87%	2.33%	2.52%	2.79%
ROTOR LOSS Pcu2	0.032	0.113	0.245	0.446	0.54	0.70
ROTOR LOSS %	0.48%	0.92%	1.35%	1.85%	2.04%	2.33%
CORE LOSS Pfe	0.543	0.543	0.543	0.543	0.543	0.543
CORE LOSS %	8.19%	4.39%	2.99%	2.25%	2.05%	1.80%
WINDAGE/FRICTION Pfw	0.398	0.398	0.398	0.398	0.398	0.398
WINDAGE/FRICTION %	6.01%	3.22%	2.20%	1.65%	1.50%	1.32%
STRAY LOAD LOSS Ps	0.033	0.062	0.091	0.120	0.132	0.151
STRAY LOAD LOSS %	0.50%	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	0.1964333 OHMS @	24 DEG.C.	BETWEEN STATOR LEADS
STATOR RESISTANCE ADJUSTED	0.246 OHMS @	90 DEG.C.	BETWEEN STATOR LEADS
STATOR RESISTANCE HOT	0.253 OHMS	after test of temp rise	BETWEEN STATOR LEADS
WINDING TEMPERATURE RISE	67.8 DEG.C.	at full load steady state at	30 SECS
WINDING TEMPERATURE RISE	71.3 DEG.C.	at full load steady state at	0 SECS
PT100 TEMPERATURE OF DE WINDING	95.3 DEG.C.	at full load steady state at ambient	23.3 DEG.C.
PT100 TEMPERATURE OF NDE WINDING	N/A DEG.C.	at full load steady state at ambient	23.3 DEG.C.
PT100 TEMPERATURE DE BEARING	77.1 DEG.C.	at full load steady state at ambient	23.3 DEG.C.
PT100 TEMPERATURE NDE BEARING	N/A DEG.C.	at full load steady state at ambient	23.3 DEG.C.
PT100 TEMPERATURE IN TERMINAL BOX	51.3 DEG.C.	at full load steady state at ambient	23.3 DEG.C.
PT100 TEMPERATURE ON STATOR LEADS	57 DEG.C.	at full load steady state at ambient	23.3 DEG.C.

OTHER			
NOISE LEVEL(Lp)	79	dB(A) @ 1meter	INSULATION RESISTANCE
VIBRATION LEVEL	2.6	mm/sec on no load	500 MEG.OHMS
WEIGHT	180	kg	D.E. BEARING
H-POT TEST VOLTS	1800	VOLTS	N.D.E.BEARING
			6211 C3
			6211 C3

VALIADIS S.A.		SCALE	N/A	
K180M-2		DATE		REV
22 kW		DRAWN		DOCUMENT NO.
400 VOLTS		APPRVD		
50 Hz		CHECKED		

RESULT SUMMARY

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NAMEPLATE DATA K180M-2 FRAME 91.4 EFFICIENCY 2 POLE VALIADIS MANUFACTURER	IEC TYPE 3 PHASE 39.0 AMPS S1 DUTY SERIAL NO.	22 KW 400 VOLTS 55 IP 0.892 PF F INS.CLASS	2942 RPM 50 HZ / CYCLES IC411 IC N/A EFF2 DELTA CONNECTION
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MAJOR CONTENTS	UNIT	TEST VALUE
STATOR RESISTANCE OF PHASE TO PHASE	90 DEG.C	OHM 0.246
NO LOAD CURRENT		AMP 11.65
NO LOAD INPUT		kW 0.986
CORE LOSS(Pfe)		kW 0.543
WINDAGE FRICTION LOSS(Pfw)		kW 0.398
STATOR WINDING LOSS(Pcu1)		kW 0.561
ROTOR WINDING LOSS(Pcu2)		kW 0.446
STRAY LOAD LOSS(Ps)		kW 0.120
FULL LOAD CURRENT		AMP 38.96
LOCKED ROTOR CURRENT		AMP 295.51
LOCKED ROTOR CURRENT/FULL LOAD CURRENT		P.U. 7.6
LOCKED ROTOR INPUT @ FULL LOAD		kW 93.44
FULL LOAD TORQUE		N.m 71.45
LOCKED ROTOR TORQUE		N.m 221.50
LOCKED ROTOR TORQUE/FULL LOAD TORQUE		P.U. 3.10
PULL OUT TORQUE		N.m 224.1
PULL OUT TORQUE/FULL LOAD TORQUE		P.U. 3.14
PULL UP TORQUE		N.m 142.83
PULL UP TORQUE/FULL LOAD TORQUE		P.U. 2.00
EFFICIENCY @ FULL LOAD		% 91.39
POWER FACTOR @ FULL LOAD		0.892
FULL LOAD SLIP		% 1.941
FULL LOAD SPEED		r/min 2942
STATOR WINDING TEMPERATURE RISE	30 SECS	K 67.8
D.E. BEARINGS TEMPERATURE BY PT100		Deg. C 77.1
TEMPERATURE ON LEADS BY PT100		Deg. C 57.0
TEMPERATURE IN TERMINAL BOX BY PT100		Deg. C 51.3
AMBIENT TEMPERATURE OF TESTING		Deg. C 23.3
SOUND PRESSURE LEVEL		dB(A) 79
VIBRATION		mm/s 2.6
MOMENT OF INERTIA		kgm2 0.0760
WEIGHT		kg 180

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

VALIADIS S.A. K180M-2 22 kW 400 VOLTS 50 Hz	SCALE		
	DATE		REV
	DRAWN		DOCUMENT NO.
	APPRVD		
CHECKED			

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NAMEPLATE DATA

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 91.4 EFFICIENCY
 2 POLE
 VALIADIS MANUFACTURER

IEC TYPE

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 39.0 AMPS
 S1 DUTY
 SERIAL NO.

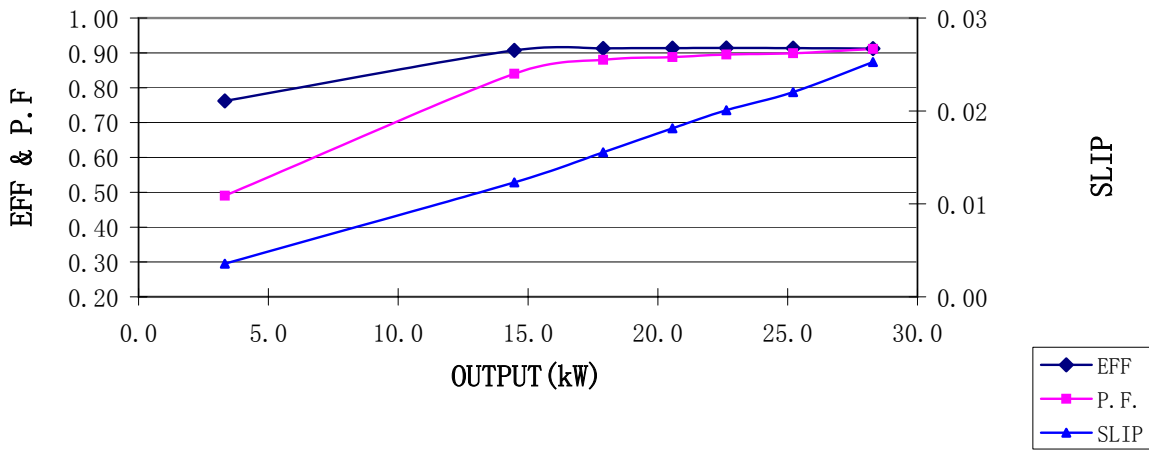
22 KW

400 VOLTS
 55 IP
 0.892 PF
 F INS.CLASS

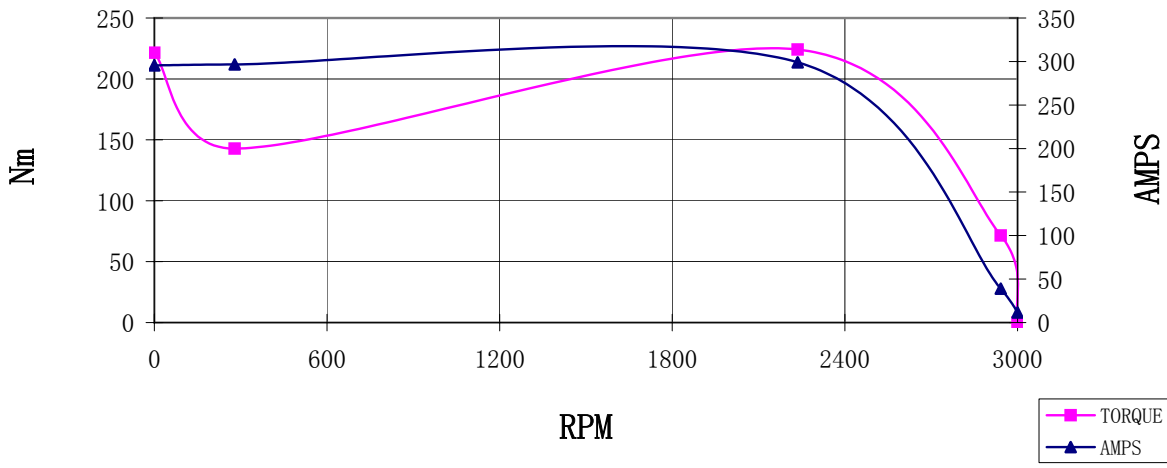
2942 RPM

50 HZ / CYCLES
 IC411 IC
 N/A EFF2
 DELTA CONNECTION

LOAD



TORQUE & AMPS VS SLIP



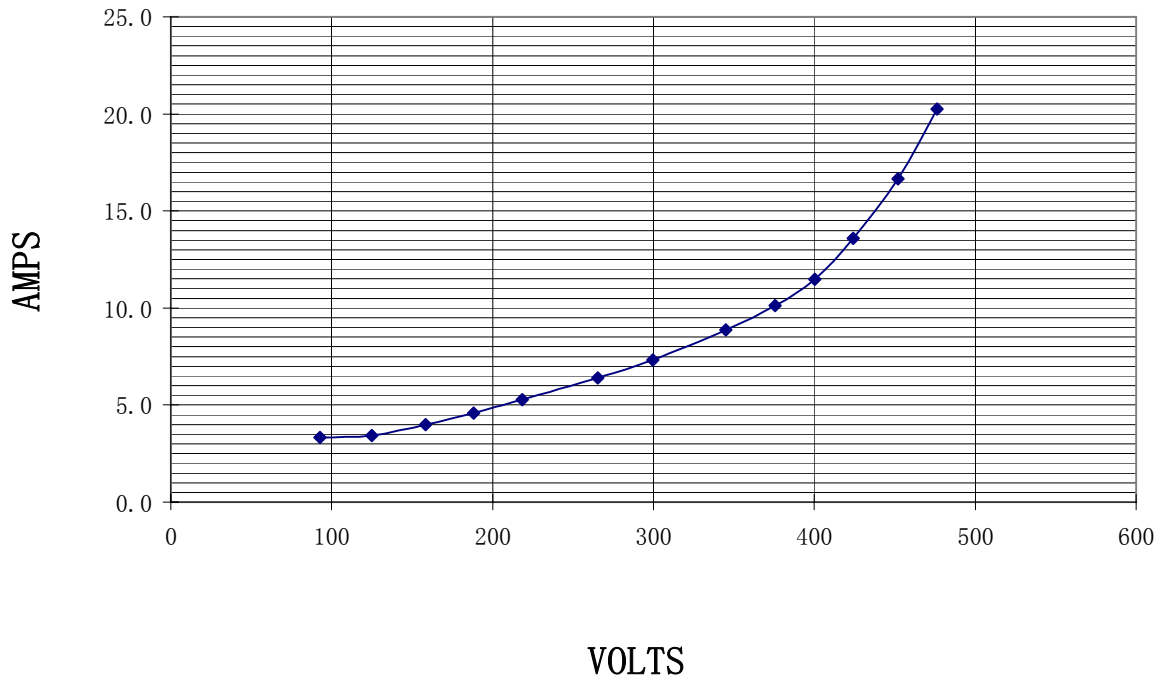
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MAGNETIZATION CURVE - NO LOAD



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