VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

NAMEPLATE DATA		IEC	**TYPE**	18.5	**KW**	2915	**RPM**
K160L-2	**FRAME**	3	**PHASE**	400	**VOLTS**	50	**HZ / CYCLES**
91.3	**EFFICIENCY**	31.9	**AMPS**	55	**IP**	IC411	**IC**
2	**POLE**	S1	**DUTY**	0.919	**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	88.50	91.48	91.84	91.26	90.90	90.26	
PF	0.113	0.755	0.876	0.910	0.919	0.919	0.918	0.489
RPM	3000	2982	2962	2940	2915	2905	2889	0
SLIP	0.00%	0.61%	1.28%	2.01%	2.84%	3.16%	3.70%	100.00%
AMPS	6.94	9.99	16.66	23.95	31.85	35.17	40.30	216.7
VOLTS	400	400	400	400	400	400	400	400
TORQUE NM	0	14.8	29.8	45.1	60.6	66.9	76.5	138.6
KW INPUT	0.544	5.23	10.11	15.11	20.27	22.39	25.62	73.38
KW OUTPUT	0	4.63	9.25	13.88	18.50	20.35	23.13	

LOSSES(kW)	25% LOAD	50% LOAD	75% LOAD	100% LOAD	110% LOAD	125%LOAD
STATOR LOSS Pcu1	0.057	0.158	0.328	0.579	0.71	0.93
STATOR LOSS %	1.09%	1.57%	2.17%	2.86%	3.15%	3.62%
ROTOR LOSS Pcu2	0.030	0.123	0.290	0.551	0.68	0.90
ROTOR LOSS %	0.57%	1.22%	1.92%	2.72%	3.02%	3.52%
CORE LOSS Pfe	0.311	0.311	0.311	0.311	0.311	0.311
CORE LOSS %	5.96%	3.08%	2.06%	1.54%	1.39%	1.21%
WINDAGE/FRICTION Pfw	0.208	0.208	0.208	0.208	0.208	0.208
WINDAGE/FRICTION %	3.98%	2.06%	1.38%	1.03%	0.93%	0.81%
STRAY LOAD LOSS Ps	0.026	0.051	0.076	0.101	0.112	0.128
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	0.2951667	OHMS @	17	DEG.C.	BETWEEN STATOR LEADS	
STATOR RESISTANCE ADJUSTED	0.381	OHMS @	90	DEG.C.	BETWEEN STATOR LEADS	
STATOR RESISTANCE HOT	0.391	OHMS	after test of	temp rise	BETWEEN STATOR LEADS	
WINDING TEMPERATURE RISE	69.7	DEG.C.	at full load steady state at		30	SECS
WINDING TEMPERATURE RISE	72.9	DEG.C.	at full load steady state at		0	SECS
PT100 TEMPERATURE OF DE WINDING	93.3	DEG.C.	at full load steady state at ambient		24.4	DEG.C.
PT100 TEMPERATURE OF NDE WINDING	N/A	DEG.C.	at full load steady state at ambient		24.4	DEG.C.
PT100 TEMPERATURE DE BEARING	77.2	DEG.C.	at full load steady state at ambient		24.4	DEG.C.
PT100 TEMPERATURE NDE BEARING	N/A	DEG.C.	at full load steady state at ambient		24.4	DEG.C.
PT100 TEMPERATURE IN TERMINAL BOX	61.9	DEG.C.	at full load steady state at ambient		24.4	DEG.C.
PT100 TEMPERATURE ON STATOR LEADS	62.5	DEG.C.	at full load steady state at ambient		24.4	DEG.C.

OTHER

NOISE LEVEL(Lp)	75	dB(A) @ 1meter	INSULATION RESISTANCE	500	MEG.OHMS
VIBRATION LEVEL	1.5	mm/sec on no load	D.E. BEARING	180209-KZ2	
WEIGHT	147	kg	N.D.E.BEARING	180209-KZ2	
H-POT TEST VOLTS	1800	VOLTS			

VALIADIS S.A.	**SCALE**	N/A		
	DATE	2003.06.08	**REV**	
K160L-2	**DRAWN**		**DOCUMENT NO.**	
18.5 kW	**APPRVD**			
400 VOLTS 50 Hz	**CHECKED**			

RESULT SUMMARY

VALIADIS S.A.

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91.3	**EFFICIENCY**	31.9	**AMPS**	55	**IP**	IC411	**IC**
2	**POLE**	S1	**DUTY**	0.92	**PF**	N/A	**EFF2**
VALIADIS	**MANUFACTURER**		**SERIAL NO.**	F	**INS.CLASS**	DELTA	**CONNECTION**

MAJOR CONTENTS			**UNIT**	**TEST VALUE**
STATOR RESISTANCE OF PHASE TO PHASE	90	DEG.C	OHM	0.381
NO LOAD CURRENT			AMP	6.94
NO LOAD INPUT			kW	0.544
CORE LOSS(Pfe)			kW	0.311
WINDAGE FRICTION LOSS(Pfw)			kW	0.208
STATOR WINDING LOSS(Pcu1)			kW	0.579
ROTOR WINDING LOSS(Pcu2)			kW	0.551
STRAY LOAD LOSS(Ps)			kW	0.101
FULL LOAD CURRENT			AMP	31.85
LOCKED ROTOR CURRENT			AMP	216.66
LOCKED ROTOR CURRENT/FULL LOAD CURRENT			P.U.	6.8
LOCKED ROTOR INPUT @ FULL LOAD			kW	73.38
FULL LOAD TORQUE			N.m	60.64
LOCKED ROTOR TORQUE			N.m	138.64
LOCKED ROTOR TORQUE/FULL LOAD TORQUE			P.U.	2.29
PULL OUT TORQUE			N.m	163.9
PULL OUT TORQUE/FULL LOAD TORQUE			P.U.	2.70
PULL UP TORQUE			N.m	113.34
PULL UP TORQUE/FULL LOAD TORQUE			P.U.	1.87
EFFICIENCY @ FULL LOAD			%	91.26
POWER FACTOR @ FULL LOAD				0.919
FULL LOAD SLIP			%	2.844
FULL LOAD SPEED			r/min	2915
STATOR WINDING TEMPERATURE RISE	30	SECS	K	70
D.E. BEARINGS TEMPERATURE BY PT100			Deg. C	77.2
TEMPERATURE ON LEADS BY PT100			Deg. C	62.5
TEMPERATURE IN TERMINAL BOX BY PT100			Deg. C	61.9
AMBIENT TEMPERATURE OF TESTING			Deg. C	24.4
SOUND PRESSURE LEVEL			dB(A)	75
VIBRATION			mm/s	1.5
MOMENT OF INERTIA			kgm2	0.0550
WEIGHT			kg	147

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

VALIADIS S.A.	**SCALE**	N/A		
	DATE	2003.06.08	**REV**	
K160L-2	**DRAWN**		**DOCUMENT NO.**	
18.5 kW	**APPRVD**			
400 VOLTS 50 Hz	**CHECKED**			

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

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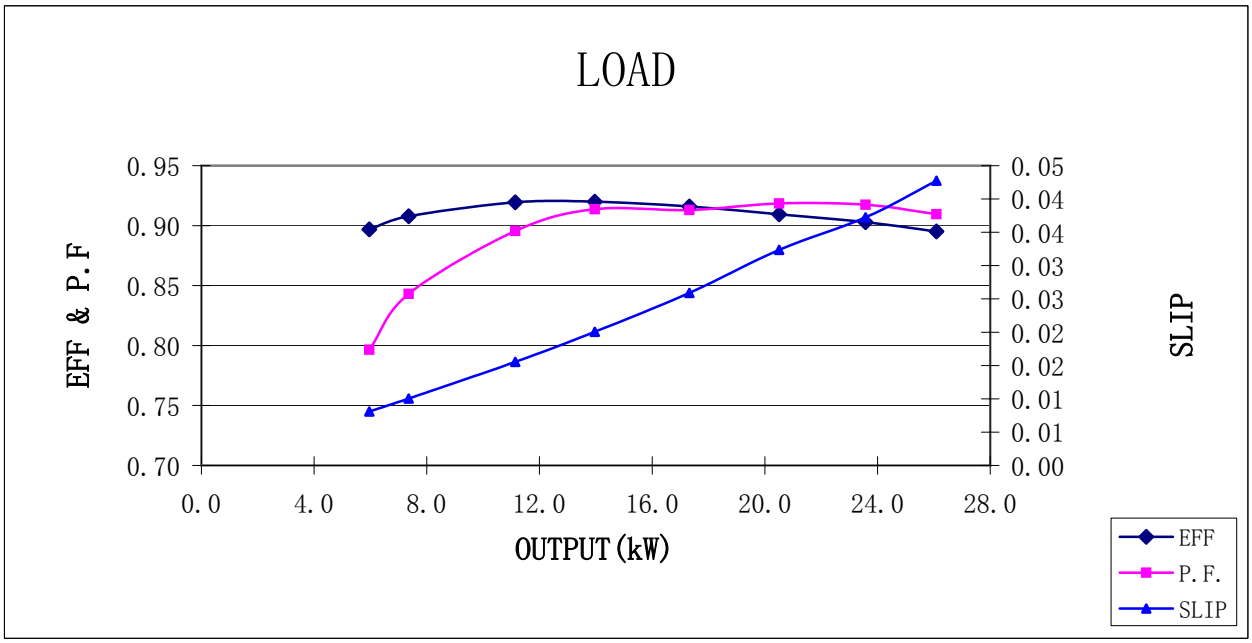
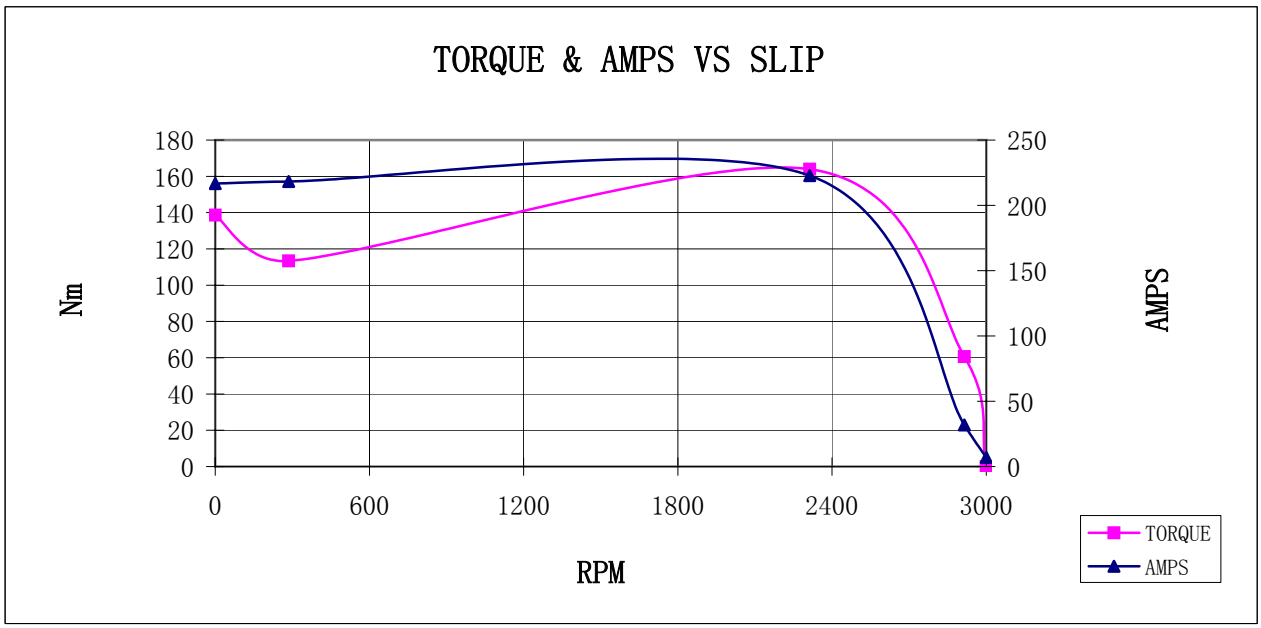
VALIADIS **MANUFACTURER**	**SERIAL NO.**	F **INS.CLASS**	DELTA **CONNECTION**





VALIADIS S.A.	**SCALE**	N/A		
	DATE	2003.06.08	**REV**	
K160L-2	**DRAWN**		**DOCUMENT NO.**	
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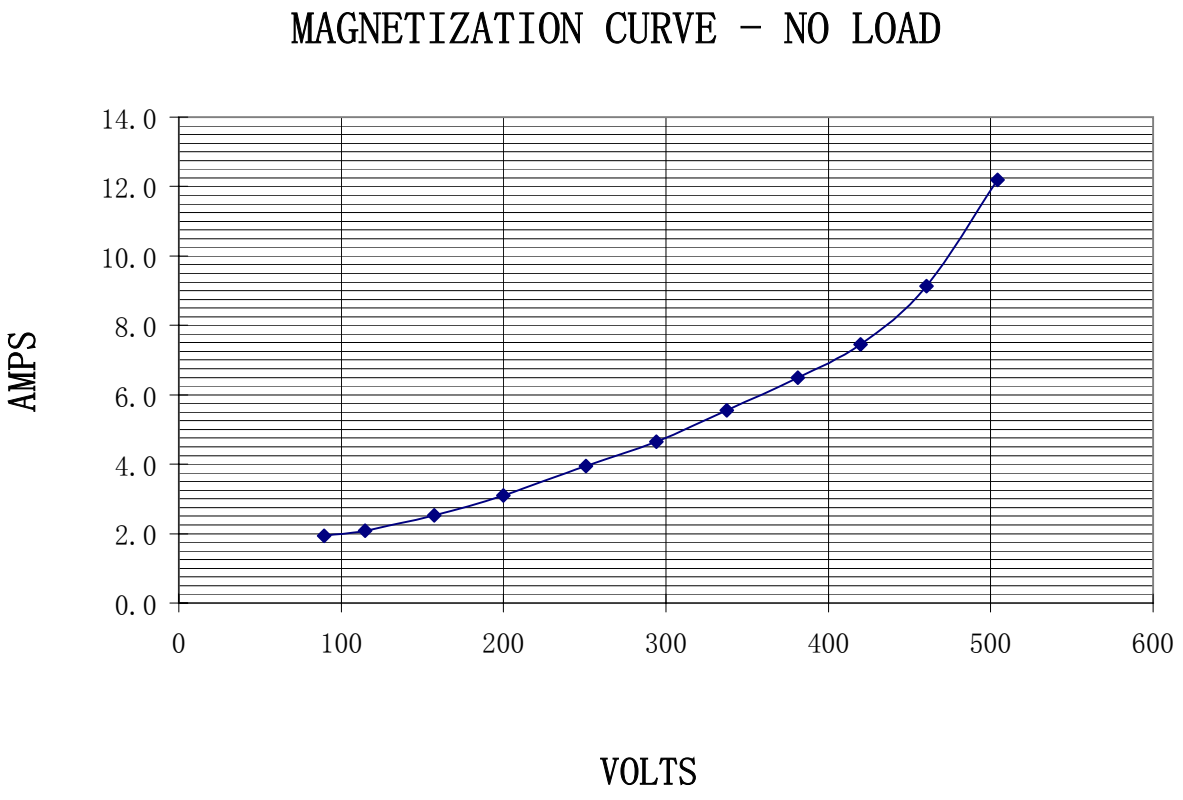

VALIADIS S.A.	**SCALE**	N/A			
	DATE	2003.06.08	**REV**		
K160L-2	**DRAWN**		**DOCUMENT NO.**		
18.5 kW	**APPRVD**				
400 VOLTS 50 Hz	**CHECKED**				