

# VALIADIS S.A.

## ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

<b>NAMEPLATE DATA</b>	6	<b>POLE</b>	50	<b>HZ / CYCLES</b>	5,50	<b>KW</b>
K132M-6	<b>FRAME</b>	3	<b>PHASE</b>	F	<b>INS.CLASS</b>	86,00
400	<b>VOLTS</b>	11,5	<b>AMPS</b>	DELTA	<b>CONNECTION</b>	IC411
968	<b>RPM</b>	S1	<b>DUTY</b>			
<b>MAJOR CONTENTS</b>		<b>UNIT</b>	<b>TEST VALUE</b>	<b>STANDARD VALUE</b>		
(95°C ) PHASE RESISTANCE OF WINDING		OHM	2,5080			
NO LOAD CURRENT		AMP	6,343			
NO LOAD INPUT		kW	310,6			
CORE LOSS(Pfe)		kW	176,1			
WINDAGE FRICTION LOSS(Pfw)		kW	40,6			
STATOR WINDING LOSS(Pcu1)		kW	343,2			
ROTOR WINDING LOSS(Pcu2)		kW	221,3			
STRAY LOAD LOSS(Ps)		kW	30,3			
LOCKED ROTOR CURRENT		A	70,3			
LOCKED ROTOR INPUT @ FULL LOAD		W	31251,3			
LOCKED ROTOR TORQUE		N.m	117,4			
PULL OUT TORQUE		N.m	126,8			
LOCKED ROTOR CURRENT/RATED CURRENT		P.U.	6,12			
LOCKED ROTOR TORQUE/RATED TORQUE		P.U.	2,16			
PULL OUT TORQUE/RATED TORQUE		P.U.	2,32			
FULL LOAD TORQUE		N.m	54,6			
FULL LOAD CURRENT		A	11,699			
FULL LOAD SLIP		%	3,829			
INPUT @ FULL LOAD		KW	6,299			
FULL LOAD SPEED		r/min	962			
EFFICIENCY @ FULL LOAD		%	87,3			
EFFICIENCY @ 75% LOAD		%	88,6			
POWER FACTOR @ FULL LOAD			0,78			
STATOR WINDING TEMPERATURE RISE		K	55			
D.E. BEARINGS TEMPERATURE BY PT100		°C	69,2			
SOUND PRESSURE LEVEL		dB(A)	61			
VIBRATION		mm/s	0,9			
<b>VALIADIS S.A.</b>		Manufacturing Date		Manufacturing Code		
		Test Date		Report Number		

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400	<b>VOLTS</b>	11,5	<b>AMPS</b>	DELTA	<b>CONNECTION</b>	
968	<b>RPM</b>	S1	<b>DUTY</b>			

**NO LOAD TEST**

V ( unit )	mul.	HZ	A1 ( unit )	A2 ( unit )	A3 ( unit )	mul.	W1 ( unit )	W2 ( uni t )	mul.	RESISTANCE
440,5	1	50	4,276	4,385	4,263	2	-837,8	1088,7	2	1,55760
418,8	1	50	3,631	3,681	3,588	2	-678,3	868,4	2	1,55760
401,7	1	50	3,224	3,251	3,189	2	-578,8	738,7	2	1,55760
363,1	1	50	2,572	2,559	2,506	2	-414,0	534,1	2	1,55760
317,1	1	50	2,073	2,036	1,992	2	-286,7	378,5	2	1,55760
272,9	1	50	1,698	1,658	1,623	2	-198,1	269,2	2	1,55760
231,5	1	50	1,396	1,371	1,319	2	-134,0	194,7	2	1,55760
185,9	1	50	1,100	1,070	1,034	2	-80,7	126,5	2	1,55760
135,1	1	50	0,794	0,762	0,740	2	-36,4	70,1	2	1,55760
90,0	1	50	0,561	0,551	0,513	2	-9,3	36,0	2	1,55760

**data calculation of no load**

V%	U0/UN	I0	P0	(U0/UN)^2	P0cu1	P0'
110,1%	1,10	8,616	501,8	1,213	173,44	328,36
104,7%	1,05	7,267	380,2	1,096	123,37	256,83
100,4%	1,00	6,443	319,8	1,009	96,98	222,82
90,8%	0,91	5,091	240,2	0,824	60,56	179,64
79,3%	0,79	4,067	183,6	0,628	38,65	144,95
68,2%	0,68	3,319	142,2	0,465	25,74	116,46
57,9%	0,58	2,724	121,4	0,335	17,34	104,06
46,5%	0,46	2,136	91,6	0,216	10,66	80,94
33,8%	0,34	1,531	67,4	0,114	5,47	61,93

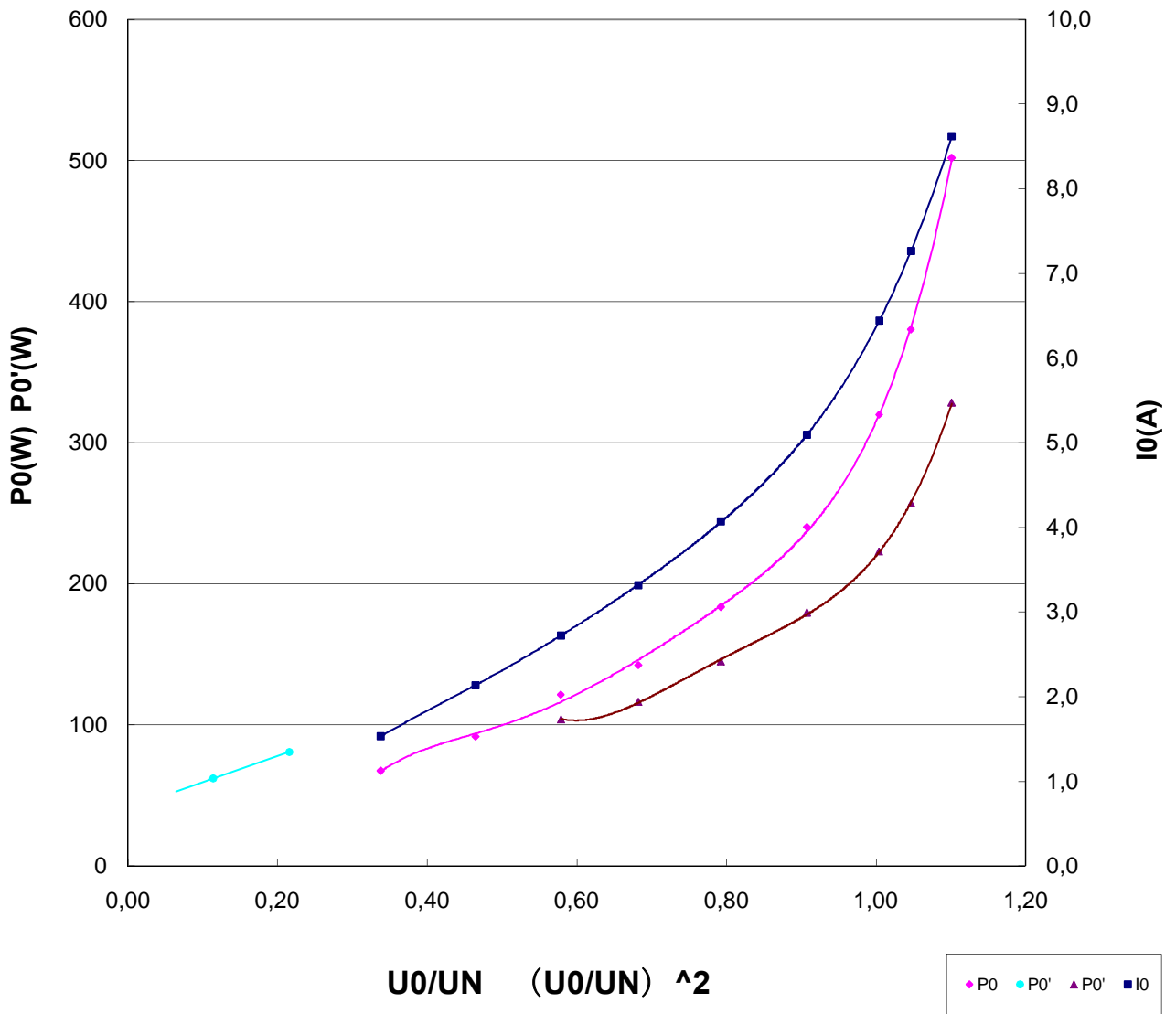
<b>RESULTS AT:</b>	<b>400</b>	<b>Volts</b>	
<b>N.L.AMP</b>	<b>N.L.LOSS</b>	<b>WINDAGE/FRICTION Pfw</b>	<b>CORE LOSS Pfe</b>
6,343	310,564	40,6	176,1
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NAMEPLATE DATA	6	POLE	50	HZ / CYCLES	5,5 KW
K132M-6	FRAME	3	PHASE	F	INS.CLASS
400	VOLTS	11,5	AMPS	DELTA	CONNECTION
968	RPM	S1	DUTY		

### NO LOAD



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K132M-6	FRAME	3	PHASE	F	INS.CLASS				
400	VOLTS	11,5	AMPS	DELTA	CONNECTION				
968	RPM	S1	DUTY						
LOCKED ROTOR TEST									
V ( unit )	mul.	A1 ( unit )	A2 ( unit )	A3 ( unit )	mul.	W1 ( unit )	W2 ( unit )	mul.	TORQUE ( Kg.m)
396,7	1	3,451	3,443	3,521	20	57,2	1474,8	20	11,69
350,5	1	2,859	2,852	2,860	20	29,1	1075,0	20	7,66
307,4	1	2,343	2,338	2,347	20	7,5	767,1	20	5,31
260,0	1	1,833	1,822	1,833	20	-11,6	495,4	20	3,39
213,6	1	1,370	1,363	1,374	20	-20,7	297,9	20	1,95
163,7	1	1,858	1,836	1,849	10	-39,9	296,1	10	0,92
111,3	1	1,083	1,067	1,074	10	-24,4	111,5	10	0,30
84,4	1	0,765	0,751	0,757	10	-14,8	58,2	10	0,12
data calculation of locked rotor									
UK V	IK A	PK KW	TK N.m	cosφ	LOG UK	LOG IK	LOGPK	LOG TK	
396,7	69,43	30,640	114,55	0,642	2,5985	1,8416	1,4863	2,0590	
350,5	57,14	22,082	75,02	0,637	2,5447	1,7569	1,3440	1,8752	
307,4	46,86	15,492	52,04	0,621	2,4877	1,6708	1,1901	1,7164	
260,0	36,59	9,676	33,18	0,587	2,4150	1,5633	0,9857	1,5209	
213,6	27,38	5,544	19,12	0,547	2,3296	1,4374	0,7438	1,2815	
163,7	18,48	2,562	9,00	0,489	2,2140	1,2666	0,4086	0,9544	
111,3	10,75	0,871	2,92	0,420	2,0465	1,0314	-0,0600	0,4646	
84,4	7,58	0,434	1,17	0,392	1,9263	0,8795	-0,3625	0,0699	
performance collection of locked rotor									
	at rated volts		at rated current		at 2.5 times rated current		at 100V		
VOLTS ( V )	400		117,588		223,4		100,0		
AMPS ( A )	70,3		11,5		28,73		9,417		
INPUT ( KW )	31,251		0,973		5,8		0,687		
TORQUE ( N.m)	117,369		3,322						
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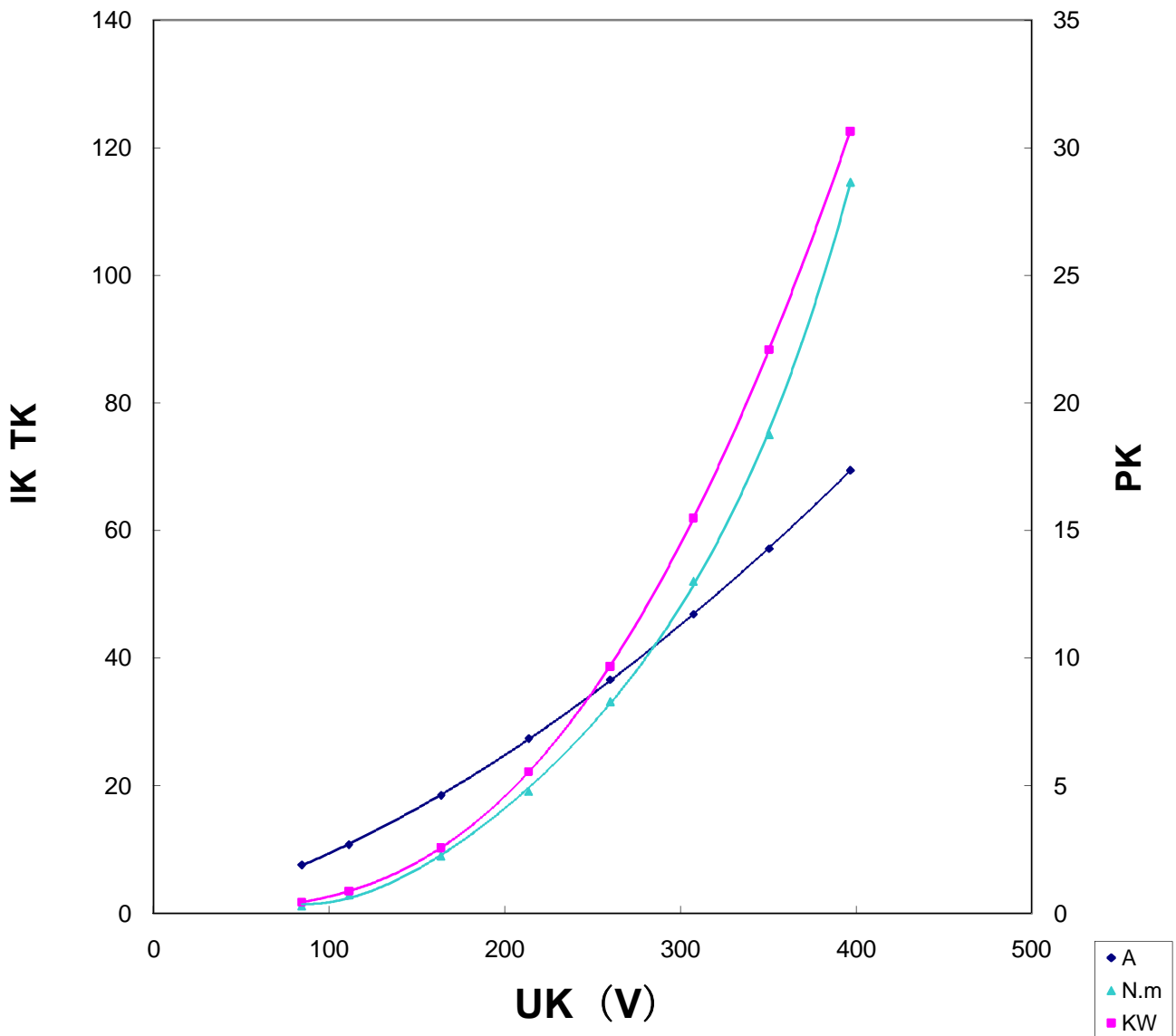
LOCKED ROTOR TEST

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<b>NAMEPLATE DATA</b>	6	<b>POLE</b>	50	<b>HZ / CYCLES</b>	5,5 KW
K132M-6	<b>FRAME</b>	3	<b>PHASE</b>	F	<b>INS.CLASS</b>
400	<b>VOLTS</b>	11,5	<b>AMPS</b>	DELTA	<b>CONNECTION</b>
968	<b>RPM</b>	S1	<b>DUTY</b>		

### LOCKED



<b>VALIADIS S.A.</b>	Manufacturing Date	Manufacturing Code
	Test Date	Report Number

LOCKED

**ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR**

<b>NAMEPLATE DATA</b>		6	POLE	50	HZ / CYCLES	5,5	KW
K132M-6	FRAME	3	PHASE	F	INS.CLASS		
400	VOLTS	11,5	AMPS	DELTA	CONNECTION		
968	RPM	S1	DUTY				

**TEMPERATURE RISE TEST**

TIME (h:min)	V	A1 ( unit )	A1 ( unit )	A1 ( unit )	mul.	W1 ( unit )	W2 ( unit )	mul.	T1 °C	T2 °C	T3 °C	T4 °C
9:30	400	2,274	2,276	2,272	5,0	1167,2		5	61,8		66,60	29,25
10:00	400	2,283	2,280	2,286	5,0	1166,4		5	61,9		68,80	29,30
10:30	400	2,275	2,276	2,276	5,0	1173,5		5	61,8		69,10	29,25
11:00	400	2,252	2,253	2,255	5,0	1153,4		5	62,0		69,80	29,35
average value of the last three points				11,35333 A		5822,167		W	61,9		69,2	29,3

T1 : CORE TEMPERATRE

T3 : DE BEARING TEMPERATURE

T2 : DE WINDING TEMPERATURE

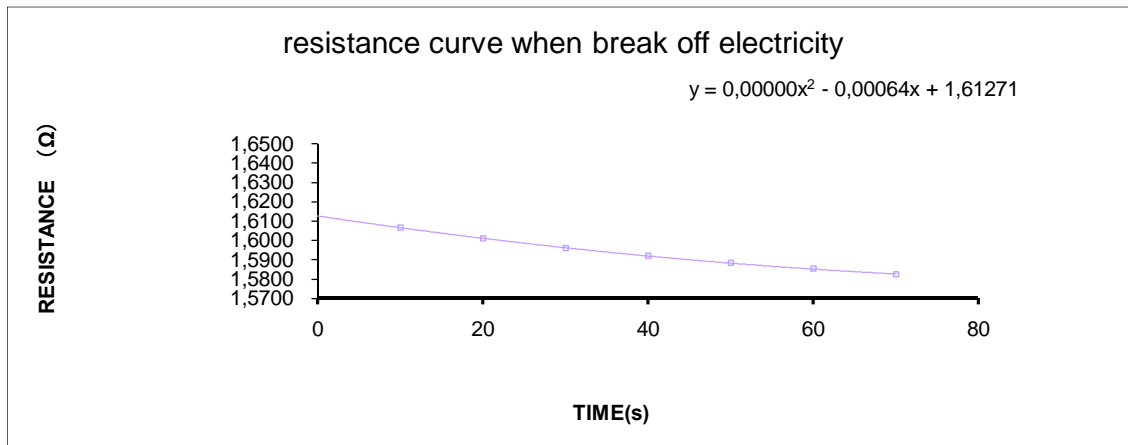
T4 : AMBIENT TEMPERATURE

**WINDING RESISTANCE (HOT) AT END OF TEMPERATURE RISE TEST**

TIMES (S)	10	20	30	40	50	60	70					
RESISTANCE ( Ω )	1,6068	1,6010	1,5960	1,5920	1,5884	1,5855	1,5825					

**WINDING RESISTANCE(COLD)**

Δ	U1 to V1	U1 to W1	V1 to W1	AVERAGE RESISTANCE	MINIMUM RESISTANCE	AMBIENT TEMPERATURE
	1,34140	1,3443	1,3499	1,3452	1,3414	30,5
Y	U	V	W	AVERAGE RESISTANCE	MINIMUM RESISTANCE	AMBIENT TEMPERATURE
					0	



resistance value at 0 sec	1,61271	calculation value of temp.rising	54,90
30 S ( Ω )	1,595867	calculation value of temp.rising	51,57
full load curent	11,70 A	modify value of temp. rising	55

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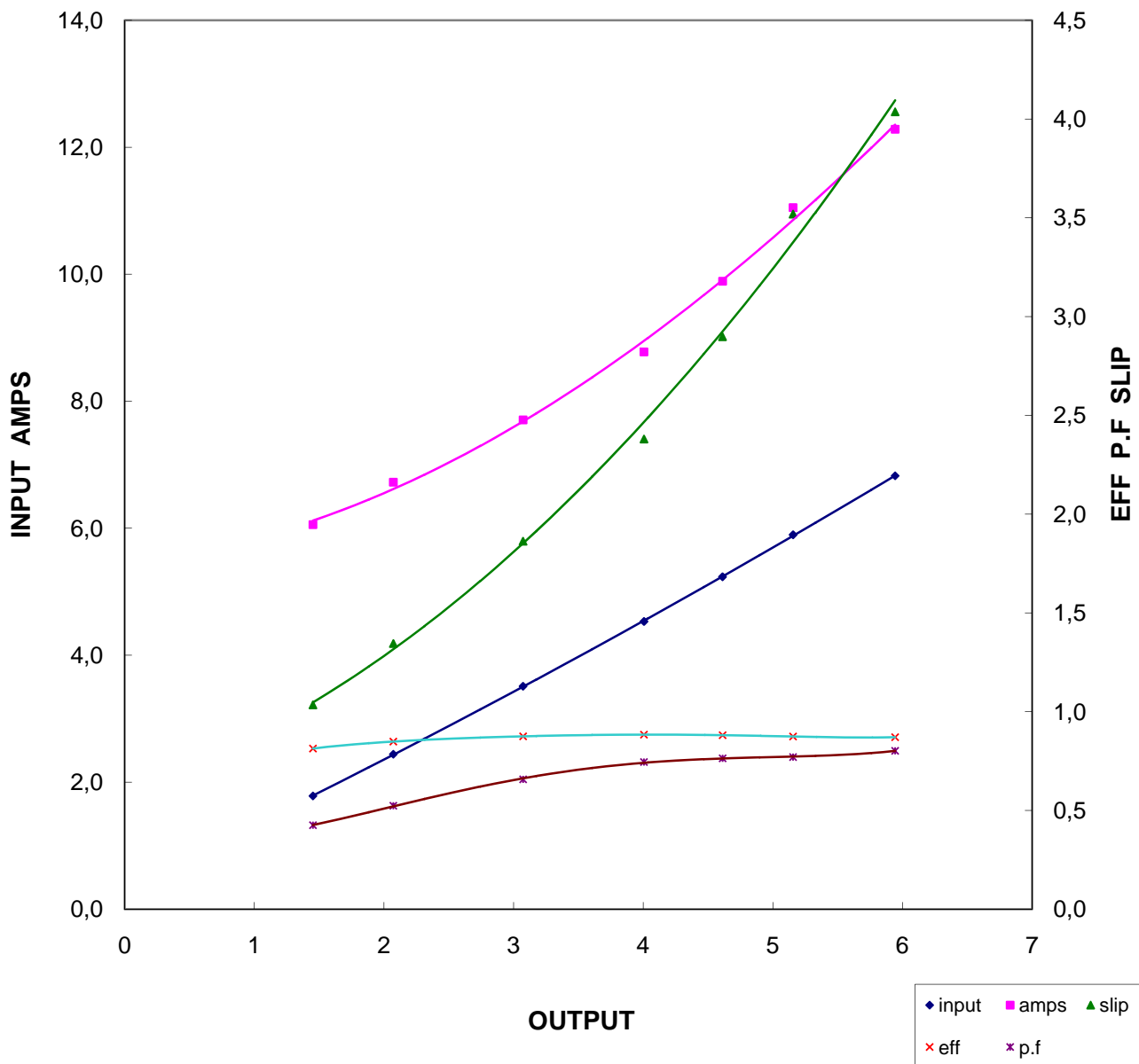
NAMEPLATE DATA		6	POLE	50	HZ / CYCLES	5,50 KW								
K132M-6	FRAME	3	PHASE	F	INS.CLASS									
400	VOLTS	11,5	AMPS	DELTA	CONNECTION									
968	RPM	S1	DUTY											
LOAD TEST														
V	HZ	A1 ( unit )	A2 ( unit )	A3 ( unit )	mul.	W1 ( unit )	W2 ( unit )	mul.	RPM					
400	50	2,424	2,509	2,437	5	344,3	1020,7	5	961,0					
400	50	2,210	2,190	2,229	5	299,1	880,2	5	966,0					
400	50	1,940	2,055	1,939	5	221,5	825,4	5	972,0					
400	50	1,802	1,795	1,669	5	198,7	707,7	5	977,0					
400	50	1,541	1,576	1,507	5	100,6	601,6	5	982,0					
400	50	1,353	1,345	1,338	5	13,2	475,1	5	987,0					
400	50	1,196	1,234	1,204	5	-69,1	426,0	5	990,0					
<b>95</b>	(°C) PHASE RESISTANCE OF WINDING	<b>2,5080</b>	<b>Ω</b>	<b>Pfe= 176,1 W</b>		<b>Pfw= 40,6 W</b>								
	<b>θ=</b>	<b>54,90</b>	<b>K</b>	<b>t2= 29,3 °C</b>										
Calculated Results	OUTPUT W	INPUT W	AMPS A	Pcu1 W	SLIP %	Pcu2 W	Ps W	EFF %	P.F.					
108,1	5943,4	6825,0	12,28	378,4	4,0362	253,1	33,4	87,08	0,802					
93,7	5156,2	5896,6	11,05	306,2	3,519	190,5	27,0	87,44	0,770					
83,9	4611,8	5234,9	9,89	245,3	2,898	139,5	21,6	88,10	0,764					
72,8	4005,9	4532,0	8,78	193,2	2,380	99,1	17,0	88,39	0,745					
55,9	3072,9	3511,0	7,71	148,9	1,863	59,4	13,1	87,52	0,658					
37,7	2072,3	2441,4	6,73	113,4	1,345	29,0	10,0	84,88	0,524					
26,4	1452,0	1784,5	6,06	92,0	1,035	15,7	8,1	81,37	0,425					
% LOAD	OUTPUT W	INPUT W	AMPS A	Pcu1 W	SLIP %	Pcu2 W	Ps W	EFF %	P.F.					
<b>125</b>	6875	7939,5	14,41	521,0	5,19	375,7	45,93	86,59	0,795					
<b>110</b>	6050	6955,2	12,52	393,2	4,17	266,2	34,67	86,98	0,802					
<b>100</b>	5500	6298,8	11,70	343,2	3,829	221,3	30,26	87,32	0,777					
<b>75</b>	4125	4656,5	8,9	197,5	2,438	104,4	17,42	88,59	0,757					
<b>50</b>	2750	3166,0	7,39	136,9	1,696	48,4	12,07	86,86	0,619					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td rowspan="2" style="text-align: center; vertical-align: middle;"><b>VALIADIS S.A.</b></td> <td style="width: 25%;">Manufacturing Date</td> <td style="width: 50%;">Manufacturing Code</td> </tr> <tr> <td>Test Date</td> <td>Report Number</td> </tr> </table>										<b>VALIADIS S.A.</b>	Manufacturing Date	Manufacturing Code	Test Date	Report Number
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### LOAD CURVE



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