Date of test:	24.11.2017	Report Number:	17694	Date of issue	25.05.2018

Motor description						
Rated output power	kW	3	Manufacturer	ARÇELİK		
Rated voltage	V	400	Model Nr.	Q3H100L4D40		
Rated current	A	6,1	Serial Nr.	8517920		
Rated speed	min^{-1}	1445	Duty type IEC 60034-1			S1
Supply frequency	Hz	50	Design			-
Number of Phases	-	3	Insulation class IEC 60085			F
IEC 60034-30-1 (Rated)	IE-Code	IE3-87,7%	Max. Ambient temperature		°C	40

Initial motor conditions			
Test resistance	R_1	Ω	1,407
Winding temperature	Θ_0	°C	24,1
Ambient temperature	Θ_a	°C	24,1

6.1.3.2.1 Rated load test			
Test resistance	R_N	Ω	1,664
Winding temperature	Θ_N	°C	75,3
Ambient temperature	Θ_a	°C	28,9

6.1.3.2.3 Load curve test			Test resistance before load test			R	Ω	1,664
Rated Output Power		%	125%	115%	100%	75%	50%	25%
Torque	T	N m	25,12	22,98	19,86	14,72	9,74	4,84
Input Power	P_1	W	4400,5	4019,2	3473,5	2595,7	1766,9	966,8
Line Current	I	A	7,47	6,92	6,03	5,03	4,11	3,46
Operating Speed	n	min^{-1}	1428	1435	1447	1460	1475	1487
Terminal Voltage	U	V	399	400	400	401	401	400
Frequency	f	Hz	50	50	50	50	50	50
Winding Temperature	Θ_w	°C	49,8	50,2	75,6	50,8	50,6	50,2
			Test resistance after load test			R	Ω	1,645

6.1.3.2.4 No-load test					Test resistance before no-load test			R	Ω	0
Rated Voltage		%	115%	100%	95%	90%	60%	50%	40%	30%
Input Power	P_0	W	248,1	188,7	165,8	149,4	70,0	52,9	43,3	25,4
Line Current	I_0	A	4,10	3,22	2,94	2,67	1,59	1,30	1,13	0,82
Terminal Voltage	U_0	V	441	400	381	360	239	200	175	128
Frequency	f_0	Hz	50	50	50	50	50	50	50	50
Power Factor	$cos\ j$	$cos\ j$	0,079	0,085	0,086	0,090	0,107	0,118	0,126	0,149
Winding Temperature	Θ_w	°C	47,70	47,65	47,55	47,50	47,15	46,95	46,70	46,26
					Test resistance after no-load test			R	Ω	1,645

6.1.3.3 Efficiency determination								
Rated output power corrected	$P_{2,\Theta}$	%	125%	115%	100%	75%	50%	25%
Output power corrected	$P_{2,\Theta}$	W	3771	3467	3030	2263	1517	764
Slip corrected	$s,_{\Theta}$	p.u.	0,0474	0,0428	0,0349	0,0263	0,0165	0,0086
Input power corrected	$P_{1,\Theta}$	W	4395	4014	3470	2593	1766	966
Iron losses	P_{fe}	W	118	118	119	121	122	122
Frict. And wind.losses corrected	$P_{fw,\Theta}$	W	11,69	11,83	12,08	12,35	12,66	12,92
Additional - losees corrected	P_{LL}	W	29,65	24,81	18,53	10,19	4,46	1,10
Stator losses corrected	$P_{s,\Theta}$	W	275	236	179	125	83	59
Rotor losses correctedd	$P_{r,\Theta}$	W	190	157	111	62	26	7
Power factor	$Cos\ \phi$	%	0,852	0,839	0,831	0,743	0,618	0,404
Efficiency	η	%	85,8	86,4	87,3	87,3	85,9	79,1

Tested by:	Ünal GÜL	Aprroved by:	Aptullah İŞLER