

VALIADIS S.A.

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

| | | | | | | |
|------------------------------|------|-------------------|------|-------------------|-------|-------------------|
| NAMEPLATE DATA | IEC | TYPE | 5.5 | KW | 2900 | RPM |
| AK132S - 2 FRAME | 3 | PHASE | 400 | VOLTS | 50 | HZ/CYCLES |
| 86.5 EFFICIENCY | 10.3 | AMPS | 55 | IP | IC01 | IC |
| 2 POLE | S1 | DUTY | 0.89 | PF | N/A | EFF2 |
| VALIADIS MANUFACTURER | | SERIAL NO. | F | INS. CLASS | DELTA | CONNECTION |

| MAJOR CONTENTS | | UNIT | TEST VALUE | |
|--|----|-------------|-------------------|--------|
| STATOR RESISTANCE OF PHASE TO PHASE | 75 | DEG.C | OHM | 1.7916 |
| NO LOAD CURRENT | | | AMP | 3.97 |
| NO LOAD INPUT | | | kW | 0.349 |
| CORE LOSS (Pfe) | | | kW | 0.183 |
| WINDAGE FRICTION LOSS (Pfw) | | | kW | 0.135 |
| STATOR WINDING LOSS(Pcu1) | | | kW | 0.2857 |
| ROTOR WINDING LOSS(Pcu2) | | | kW | 0.1954 |
| STRAY LOAD LOSS (Ps) | | | kW | 0.0317 |
| FULL LOAD CURRENT | | | AMP | 10.31 |
| LOCKED ROTOR CURRENT | | | AMP | 91.64 |
| LOCKED ROTOR CURRENT/FULL LOAD CURRENT | | | P.U. | 8.9 |
| LOCKED ROTOR INPUT @ 100% VOLT | | | kW | 35.892 |
| FULL LOAD TORQUE | | | N.m. | 18.11 |
| LOCKED ROTOR TORQUE | | | N.m. | 41.60 |
| LOCKED ROTOR TORQUE/FULL LOAD TORQUE | | | P.U. | 2.30 |
| PULL OUT TORQUE | | | N.m. | 66.47 |
| PULL OUT TORQUE/FULL LOAD TORQUE | | | P.U. | 3.67 |
| PULL UP TORQUE | | | N.m. | 32 |
| PULL UP TORQUE/FULL LOAD TORQUE | | | P.U. | 1.77 |
| EFFICIENCY @ FULL LOAD | | | % | 86.88 |
| POWER FACTOR @ FULL LOAD | | | | 0.886 |
| FULL LOAD SLIP | | | | 3.33% |
| FULL LOAD SPEED | | | r/min | 2900 |
| STATOR WINDING TEMPERATURE RISE | 30 | SECS | K | 52.1 |
| DE BEARING TEMPERATURE BY PT100 | | | Deg. C | 53.5 |
| NDE BEARING TEMPERATURE BY PT100 | | | Deg. C | 51.5 |
| 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) | 72.0 |
| VIBRATION | | | mm/s | 0.9 |
| MOMENT OF INERTIA | | | kgm ² | 0.0109 |
| WEIGHT | | | kg | 38 |

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

| | | | | | | | |
|--|--|--|--|----------------|------------|---------------------|--|
| VALIADIS S.A. | | | | SCALE | N/A | | |
| | | | | DATE | | REV | |
| AK132S - 2 5.5 kW 400 VOLTS 50 Hz | | | | DRAWN | | DOCUMENT NO. | |
| | | | | APPRVD | | | |
| | | | | CHECKED | | | |

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|-----------------------|---------------------|-------------------|--------------|-------------------|--------------|-------------------|
| NAMEPLATE DATA | IEC | TYPE | 5.5 | KW | 2900 | RPM |
| AK132S-2 | FRAME | 3 | PHASE | 400 | VOLTS | 50 |
| 86.5 | EFFICIENCY | 10.3 | AMPS | 55 | IP | IC01 |
| 2 | POLE | S1 | DUTY | 0.89 | PF | N/A |
| VALIADIS | MANUFACTURER | SERIAL NO. | F | INS. CLASS | DELTA | CONNECTION |

| TEST DATA | NO LOAD | 25% LOAD | 50% LOAD | 75% LOAD | 100% LOAD | 125% LOAD | LOCKED ROTOR |
|------------------|---------|----------|----------|----------|-----------|-----------|--------------|
| EFFICIENCY | 0 | 76.9 | 84.8 | 86.8 | 86.9 | 86.0 | |
| PF | 0.127 | 0.547 | 0.767 | 0.854 | 0.886 | 0.899 | 0.565 |
| RPM | 3000 | 2949 | 2939 | 2923 | 2900 | 2870 | 0 |
| SLIP | 0.00% | 1.70% | 2.03% | 2.57% | 3.33% | 4.33% | 100.00% |
| AMPS | 3.97 | 4.72 | 6.11 | 8.03 | 10.31 | 12.83 | 91.64 |
| VOLTS | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| TORQUE NM | 0 | 4.45 | 8.94 | 13.48 | 18.11 | 22.87 | 41.60 |
| KW INPUT | 0.349 | 1.788 | 3.245 | 4.753 | 6.331 | 7.994 | 35.892 |
| KW OUTPUT | 0 | 1.375 | 2.750 | 4.125 | 5.500 | 6.874 | |

| LOSSES (kW) | 25% LOAD | 50% LOAD | 75% LOAD | 100% LOAD | 125% LOAD |
|---------------------|----------|----------|----------|-----------|-----------|
| STATOR LOSS Pcu1 | 0.060 | 0.100 | 0.173 | 0.286 | 0.442 |
| STATOR LOSS % | 3.35% | 3.09% | 3.65% | 4.51% | 1.23% |
| ROTOR LOSS Pcu2 | 0.026 | 0.060 | 0.113 | 0.195 | 0.319 |
| ROTOR LOSS % | 1.47% | 1.86% | 2.37% | 3.09% | 0.89% |
| CORE LOSS Pfe | 0.183 | 0.183 | 0.183 | 0.183 | 0.183 |
| CORE LOSS % | 10.23% | 5.64% | 3.85% | 2.89% | 0.51% |
| WINDGE/FRICTION Pfw | 0.135 | 0.135 | 0.135 | 0.135 | 0.135 |
| WINDGE/FRICTION % | 7.55% | 4.16% | 2.84% | 2.13% | 0.38% |
| STRAY LOAD LOSS Ps | 0.009 | 0.016 | 0.024 | 0.032 | 0.040 |
| 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 | 1.48527 OHMS @ | 22.0 | DEG.C. | BETWEEN STATOR LEADS |
| STATOR RESISTANCE ADJUSTED | 1.7916 OHMS @ | 75 | DEG.C. | BETWEEN STATOR LEADS |
| STATOR RESISTANCE HOT | 1.7982 OHMS | after test of temp rise | | BETWEEN STATOR LEADS |
| WINDING TEMPERATURE RISE | 52.1 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 | 53.5 DEG.C. | at full load steady state at ambient | | 24.0 DEG.C. |
| PT100 TEMPERATURE OF NDE BEARING | 51.5 DEG.C. | at full load steady state at ambient | | 24.0 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) | 72 | dB(A) 1meter | INSULATION RESISTANCE | 500 | MEG.OHMS |
| VIBRATION LEVEL | 0.9 | mm/sec on no load | D.E. BEARING | | |
| WEIGHT | 38 | kg | N.D.E. BEARING | | |
| H-POT TEST VOLTS | 1800 | VOLTS | | | |

| | | | | | | | |
|----------------------|--------------|-----------|-----------|----------------|------------|---------------------|--|
| VALIADIS S.A. | | | | SCALE | N/A | | |
| | | | | DATE | | REV | |
| AK132S-2 | | | | DRAWN | | DOCUMENT NO. | |
| 5.5 | | kW | | APPRVD | | | |
| 400 | VOLTS | 50 | Hz | CHECKED | | | |

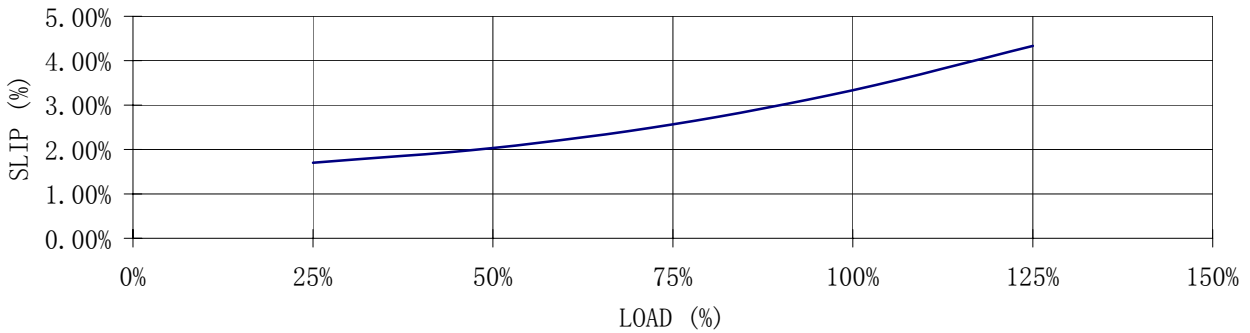
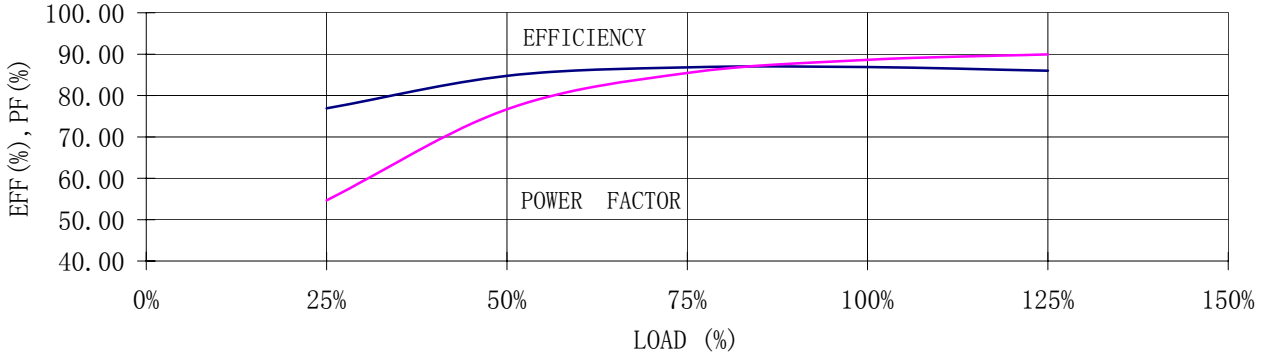
RESULT SUMMARY

VALIADIS S.A.

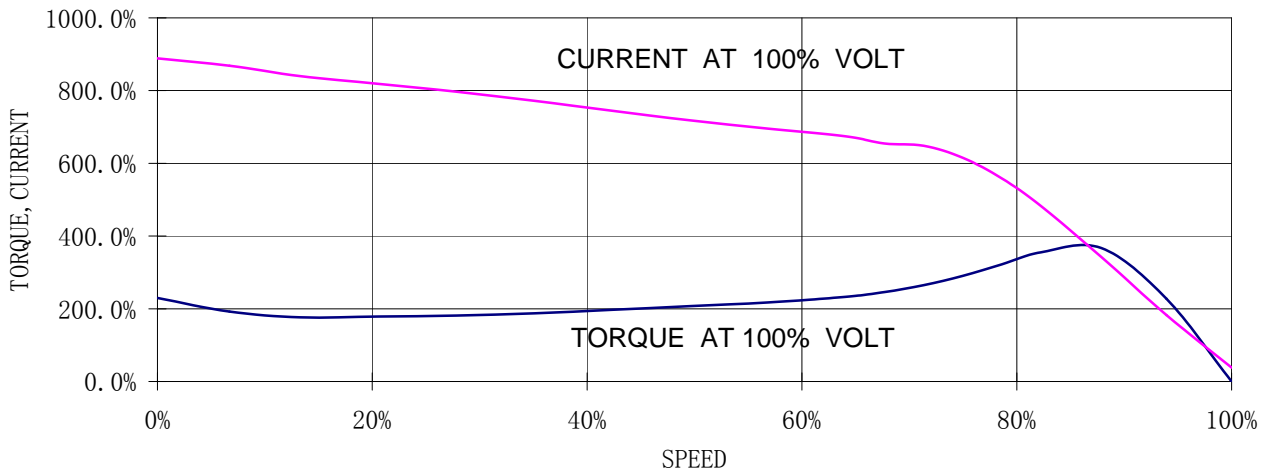
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LOAD TEST



SPEED VS TORQUE, CURRENT



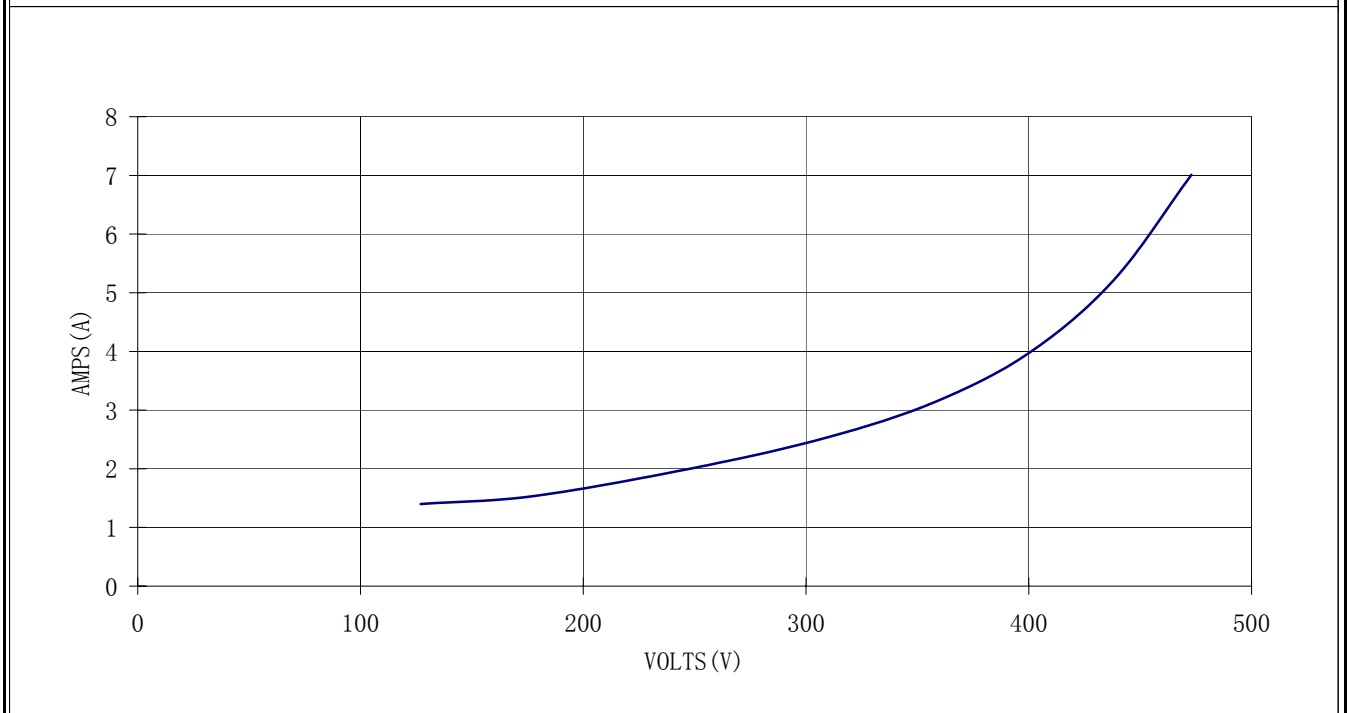
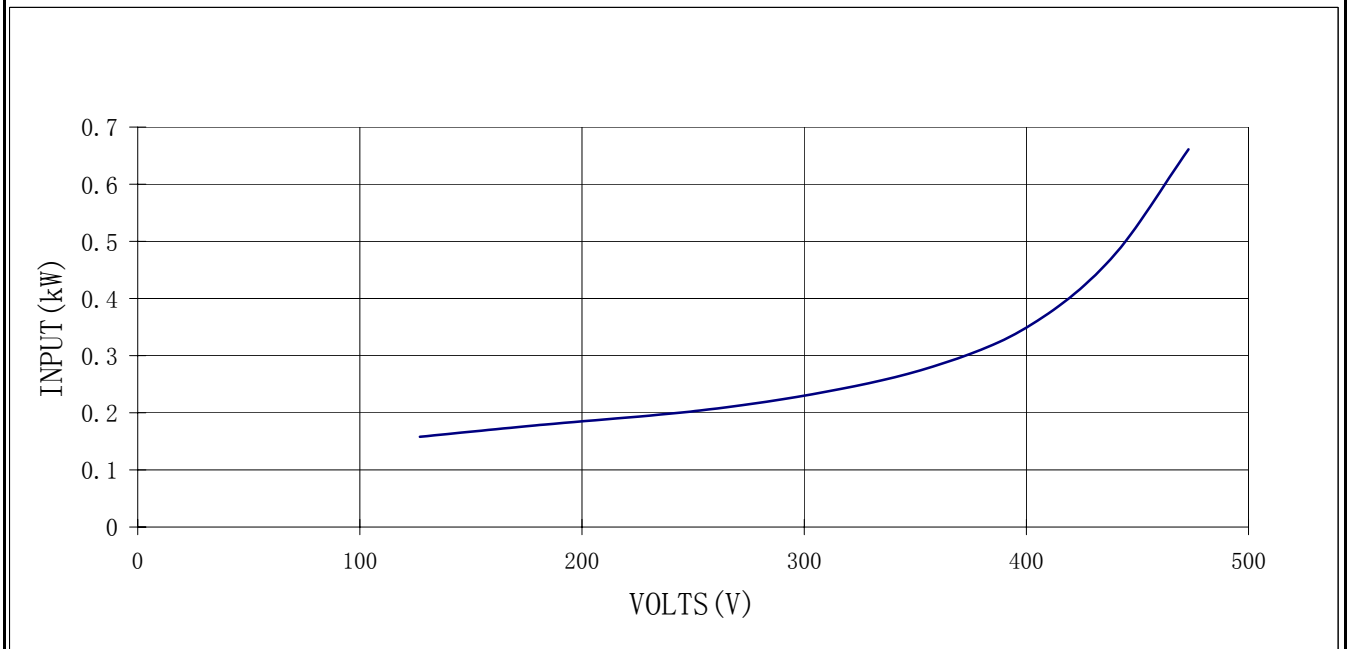
| | | | | |
|------------------------|----------------------|---------------|------------|---------------------|
| | VALIADIS S.A. | SCALE | N/A | |
| | | DATE | | REV |
| | AK132S-2 | DRAWN | | DOCUMENT NO. |
| | 5.5 kW | APPRVD | | |
| 400 VOLTS 50 Hz | CHECKED | | | |

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

NO LOAD TEST



| | | | | | | |
|---------------------------------------|--|--|--|----------------|-----|---------------------|
| VALIADIS S.A. | | | | SCALE | N/A | |
| | | | | DATE | | REV |
| AK132S-2 5.5 kW 400 VOLTS 50 Hz | | | | DRAWN | | DOCUMENT NO. |
| | | | | APPRVD | | |
| | | | | CHECKED | | |

CURVE