



INTERNATIONAL ELECTROTECHNICAL COMMISSION

TECHNICAL COMMITTEE NO.2: ROTATING MACHINERY

RESULTS OF 2/1458/DC – DETERMINATION OF EFFICIENCY OF INDUCTION MOTORS FROM TESTS – PARTICIPATION IN ROUND-ROBIN TEST.

Following the call for participation in 2/1458/DC, IEC/TC2 expresses its gratitude to BR, CZ, DE, JP, PL and US (currently offering 16 test laboratories) that have shown an interest in supporting this test program. The present breakdown by category is:

| Category | a | b | c | d |
|-----------|----|----|----|----|
| Test labs | 11 | 13 | 10 | 11 |

Additional countries are still welcome.

Mr. Bartheld (US) has been assigned as Program Manager (PM). He is an active expert in WG28 and has no company affiliation. For the past 8 years he has audited test laboratories for the US government in the area of energy-efficient motors. **All future communication regarding this program will be distributed/received by the PM at:**

Rbartheld@aol.com

Several comments/questions (not answered elsewhere) were submitted which are clarified below:

- The program is not intended to gain knowledge on available and necessary testing lab qualifications and capacity. There will be no reference to any specific testing laboratory which will only be known to the PM except for those participating in Part 3 as these labs will have to know where to send sample motors.
- All costs associated with in-house testing will be the responsibility of the testing laboratory which will also be responsible for shipping the round-robin motor to the next laboratory.
- This program is intended to better define “uncertainty” of motor testing and not with meeting any specific efficiency level or category.
- By testing per IEC 60034-2-1 questions of instrumentation accuracy are established.
- This test program will be scheduled to be completed by the end of 2008. It may take a few more months to prepare a summary report and make recommendations to TC2 for the revision tolerances and test procedures.

Procedural comments:

- **The PM will communicate with all contacts before the end of the year to better define their specific participation.**
- Report forms to record results will be distributed after the first quarter of 2008. Note that that motor testing can take place before receipt of these forms.
- Completed test results should be submitted to the PM quarterly.

- Every effort will be made to reduce extra testing by any laboratory.
- As of this date there will be at least 2, preferably 3 round-robin test groups.
 1. Europe
 2. The Americas
 3. Japan (to be resolved)
- All testing shall be in accordance with IEC 60034-2-1.

Goals and time schedule:

Part 1: Same motor

This series of test results will help to quantify the difference between test methods and also help to establish the influence of testing tolerances. A second aim of this series is to improve the test procedure for the next revision of IE 60034-2-1.

Testing can start as soon as a specific rating has been agreed with the PM.

The goal is to complete this part during the first quarter 2008, but no later than June 2008.

Part 2: Same design motor

This series of test results will identify the uncertainty introduced by variations in materials and manufacturing procedures. Many of these tests should be historical as they are an element of normal quality control.

Testing can start as soon as a specific rating has been agreed with the PM.

The goal is to complete this part during the second quarter 2008, but no later than December 2008 when no historical tests are available.

Part 3: Round Robin

This series of test results will help to quantify the difference between test methods and also help to establish the influence of test facilities on uncertainty.

Testing can start as soon as a specific rating and sequence of test laboratories has been established by the PM.

The goal is to complete this part during the third quarter 2008, but no later than December 2008.