SOUTH QUALITY

PROFICIENCY TESTING PROVIDER

REPORT No 11653

Date of issue: *February 4, 2026*

Status: FINAL REPORT

****

EN 1303

BUILDING HARDWARE

CYLINDERS FOR LOCKS

Program: SQO-6091.V1 - Round 1

****

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Berenice Ferrel Assistant Technician	**Lic. Esther Casas** Physics expert	**Eng. Emiliano Medina** Quality Assurance Lead

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1. FOREWORD

This report summarizes the results of the **SQO-6091.V1 (Round 1)** proficiency testing program on the verification of compliance with requirements for lock cylinders for buildings and doors. This program is carried out under a simultaneous participation format, according to the A.3.1 classification of the ISO 17043 standard ("Model 2 - Figure A.1").

South Quality conducted the testing program from August 2025 to January 2026 with the aim of assessing the laboratory's ability to competently perform the designated tests.

2. ORGANIZATION

Program Coordinator:	Lic. Esther Casas
Assistant Technician:	Berenice Ferrel
Statistic:	Lic. Manuel Tozaki
Supervision:	Eng. Emiliano Medina

3. OBJECTIVE

The objective of this proficiency testing program is to verify of the classification based on analysis and test results using the following standard:

Standard
EN 1303: 2015

To verify this, batches of lock cylinders have been selected.

Participants in this program have not been previously informed about the expected results of the samples they receive.

4. PARTICIPANTS

In the present round, 9 laboratories participated, as detailed below:

CODE	Country	ISO 17025 Accredited	Results delivered
01	Malaysia	Yes	Yes
02	Italy	Yes	Yes
03	Italy	Yes	Yes
04	Germany	Yes	Yes
05	Netherlands	Yes	Yes
06	France	Yes	Yes
07	China	No	Yes
08	Spain	Yes	Yes
09	Italy	Yes	Yes

5. HOMOGENEITY

Several batches were prepared by South Quality personnel in an identical way.

Subsequently, a homogeneity study was conducted with an ISO 17025 accredited laboratory.

The control process followed ISO 33405: 2024, clauses 7.4.1.1 / 7.4.1.2. Stratified random sampling was employed, and samples were chosen using random number generation software.

The results of this test appear below:

Size of each batch: **100 samples** Tested samples from each batch: **20 samples**

DETERMINATION	HOMOGENEITY OF RESULTS IN THE ANALYZED SAMPLES		
	BATCH: LMI2851	BATCH: LMI2852	BATCH: LMI2853
Verification of sample classification	YES	YES	YES

Samples for this program are taken from the selected batch identified as LMI2852.

Analysis of this testing data indicated that samples were sufficiently homogeneous for the program and, therefore, any participant results identified as outliers cannot be attributed to sample variability.

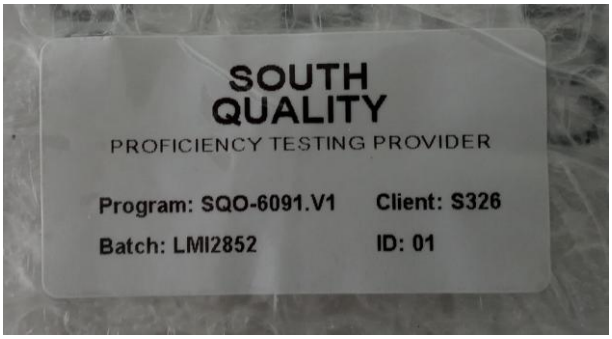
6. SAMPLE INFORMATION

The following samples were sent for testing (Participant **Code 01**):

Batch:	LMI2852
Sample ID:	01
Characteristics:	Lock cylinder - 80 mm (5 units) Trademark: INOMAX Model: 40/40 Classification under verification: **1 6 0 0 0 A 3 0**

7. IMAGES

SAMPLES

SAMPLES


8. ASSIGNED VALUES

The assigned values are obtained from the results reported by all participants (**Consensus values**).

9. STATISTICS

The results must be treated as qualitative.

For qualitative results, the comparison will be made directly against the assigned values, so any difference will be evaluated as **Unsatisfactory**.

10. PARTICIPANT RESULTS

Clause / Subclause	LABORATORY CODE									CONSENSUS VALUE
	01	02	03	04	05	06	07	08	09	
4.2	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	**PASS**
4.3	PASS	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	PASS	**PASS**
4.7.1	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	PASS	PASS	**PASS**
4.8.1	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	**PASS**
4.8.2	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	**PASS**
4.8.3	PASS	PASS	PASS	PASS	PASS	PASS	FAIL	PASS	PASS	**PASS**
4.8.4	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	**PASS**
4.8.5	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	**PASS**
4.8.6	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	**PASS**

11. EVALUATION OF PERFORMANCE

Laboratory **Code 01**: The laboratory has obtained **SATISFACTORY** results in the evaluation of all results arising from the conducted tests.

Laboratory **Code 02**: The laboratory has obtained **SATISFACTORY** results in the evaluation of all results arising from the conducted tests.

Laboratory **Code 03**: The laboratory has obtained **SATISFACTORY** results in the evaluation of all results arising from the conducted tests.

Laboratory **Code 04**: The laboratory has obtained **SATISFACTORY** results in the evaluation of all results arising from the conducted tests.

Laboratory **Code 05**: The laboratory has obtained **SATISFACTORY** results in the evaluation of all results arising from the conducted tests.

Laboratory **Code 06**: The laboratory has obtained **SATISFACTORY** results in the evaluation of all results arising from the conducted tests.

Laboratory **Code 07**: The laboratory has obtained **UNSATISFACTORY** results in the testing of clauses 4.7.1 and 4.8.3.

Laboratory **Code 08**: The laboratory has obtained an **UNSATISFACTORY** result in the testing of clause 4.3.

Laboratory **Code 09**: The laboratory has obtained **SATISFACTORY** results in the evaluation of all results arising from the conducted tests.

12. CONCLUSIONS

The overall performance on this **SQ-6091.V1 (Round 1)** program from the participating laboratories, based on expected results, are the following:

- Participants Codes **01, 02, 03, 04, 05, 06,** and **09** have obtained a **SUFFICIENT** performance in accordance with the expected results and do not require any action;

- Participants Code **07,** and **08** have obtained an **INSUFFICIENT** performance in accordance with the expected results and must take action on the tests where results differed from those expected (See annex B).

The criteria used for the evaluation of the overall performance are as follows:

- **SUFFICIENT** performance: No unsatisfactory results were obtained.

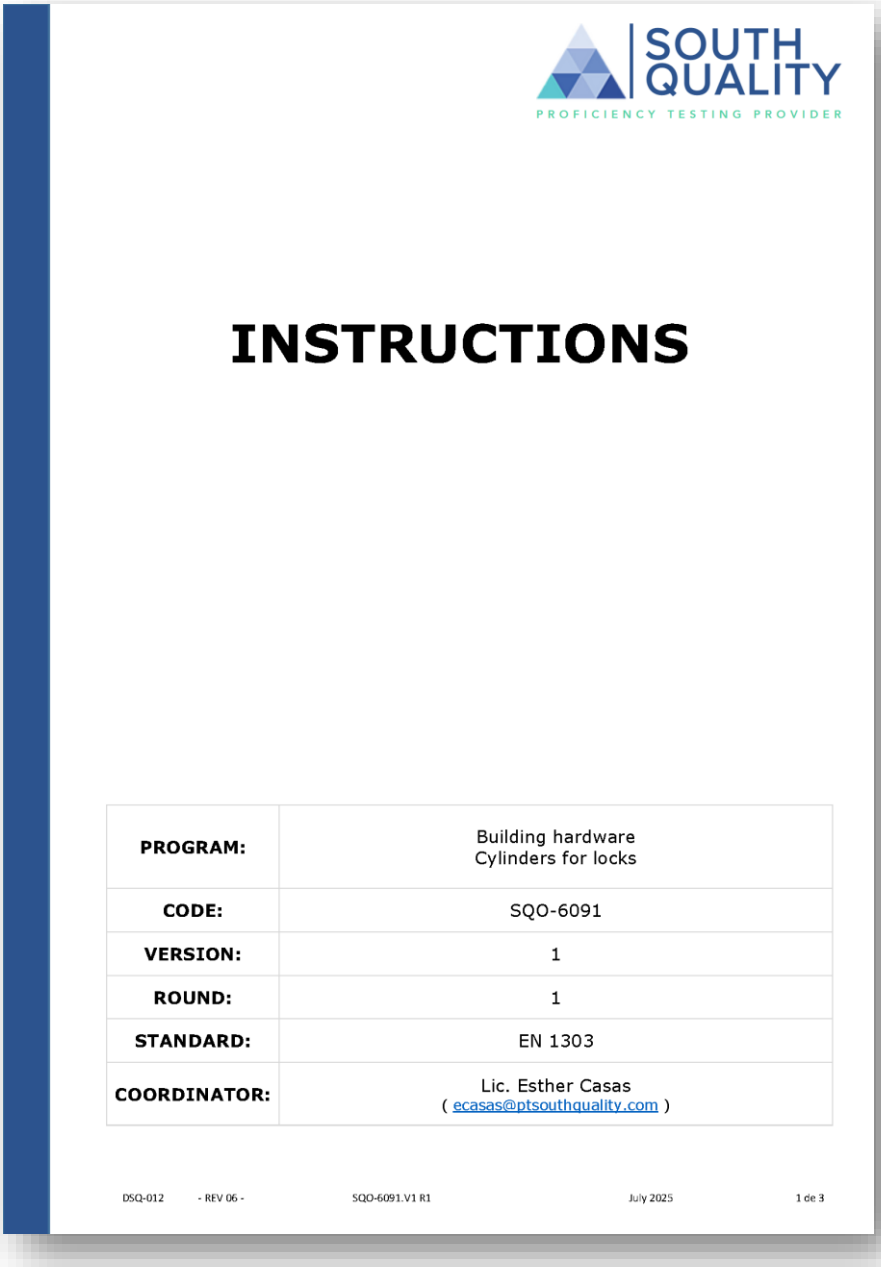
- **INSUFFICIENT** performance: One or more unsatisfactory result were obtained.

APPENDIX A

A1 - PARTICIPANT DATA

Company:	**SIRIM QAS INTERNATIONAL SDN. BHD.**
Laboratory:	**MECHANICAL INDUSTRIAL PRODUCT LAB**
Country:	Malaysia
Client ID:	S326
Contact person:	SHAIRAZI BIN ABDUL WAHAB (Senior Testing Engineer)
	shairazi@sirim.my

A2 - INSTRUCTIONS



INSTRUCTIONS

PROGRAM:	Building hardware Cylinders for locks
CODE:	SQO-6091
VERSION:	1
ROUND:	1
STANDARD:	EN 1303
COORDINATOR:	Lic. Esther Casas (ecasas@ptsouthquality.com)

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1 - General

This document serves as a guide for managing the results of the **SQO-6091.V1 (Round 1)** program.

2 - Standard

EN 1303: 2015

3 - Participant

SIRIM QAS INTERNATIONAL SDN. BHD. MECHANICAL INDUSTRIAL PRODUCT LAB	**CODE 01**

4 - Tests involved

TEST
Verification of the classification based on analysis and test results

5 - Samples

CODE	SAMPLE	QUANTITY
LMI2852-01	Lock cylinder - 80 mm	5 units

6 - Notes

a) The deadline for submitting the results is **October 31, 2025.**

b) The participants must submit the results using the usual report employed by their laboratory.

c) The samples must be verified to determine whether they comply with the following classification:

1	6	0	0	0	A	3	0

d) Samples must be retained until the end of the program, which concludes with the submission of the final report.

e) To review the results, test images would be appreciated. Images can be attached at the end of this document or sent by email.

PHOTOGRAPHS

A3 - PARTICIPANT RESULTS

SIRIM QAS International Sdn. Bhd. (410334-X)
No.1, Persiaran Dato' Menteri, Section 2, P.O. Box 7035,
40700 Shah Alam, Selangor Darul Ehsan, Malaysia.
Tel: +603-5544 6382 / 6383
Fax: +603-5544 6381
www.sirim-qas.com.my

TEST REPORT

REPORT NO. : PT-ILC-MIPL-002-2025	PAGE: 1 OF 8

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Applicant	:	**PT SOUTH QUALITY SAS** CUIT 30-71707517-6 Pareja 3981 - Villa Devoto (C1419VG) Ciudad Autonoma de Buenos Aires - ARGENTINA
Manufacturer	:	Not Applicable
Product		IRON MONGERIES – LOCK CYLINDER
Reference Standard/ Method of test	:	BS EN 1303: 2015 Building hardware. Cylinders for locks. Requirements and test methods
Description of sample/ Description of Test Specimen	:	Program Code : SQO-6091.V1 Sample Code : LMI2852-01 Classification : 16000A30 No. of Sample : 5 units
Date Received of Complete Application	:	Not Applicable
Job No.	:	SQO-6091.V1
Description of Test Results/ Overall Test Result	:	The test results for the submitted test samples as described in this test report did not comply with the requirements of the above reference standard
Issued date	:	**9 January 2026**

Approved Signatory

(SHAIRAZI BIN ABDUL WAHAB)
Senior Testing Engineer

(Ir. KAMARULZAMAN BIN MAT ZIN)
Head
Mechanical & Automotive Section (MAST)
Testing Services Department

REPORT NO. : PT-ILC-MIPL-002-2025	PAGE: 2 OF 8

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SUMMARY OF RESULTS

Product Description	Sample Code	Classification	Results
Lock Cylinder - 80 mm	LMI2852-01	1 6 0 0 0 A 3 0	The submitted test sample **Complied With** all applicable mechanical performance requirements of BS EN 1303: 2015

Remarks:

1. Five (5) units of profile cylinder identified as 'LMI2852-01 Lock Cylinder - 80 mm', were submitted for testing to verify the durability, strength, security, and performance of cylinders and their original keys in accordance with BS EN 1303: 2015
2. The submitted sample(s) provided by the applicant in this test report only apply to the samples as received.
3. The test was conducted at the testing lab of SIRIM QAS INTERNATIONAL SDN. BHD., located at 1 Persiaran Dato' Menteri, Section 2, P.O. Box 7035, 40700 Shah Alam, MALAYSIA. The test took place from October 30th, 2025, to December 25th, 2025.
4. All types of tests were conducted by personnel from the Mechanical & Automotive Section (MAST), Testing Service Department, SIRIM QAS International Sdn. Bhd.
5. A Simple Acceptance Rule was used for the conformity statement. The level of risk regarding the Probability of False Acceptance is up to 50%, according to ILAC G8:09
6. The abbreviation used in this test report denotes as follows;

   Pass: Complied with the requirement — **N/A:** Not applicable with the requirement

   Fail: Did not comply with the requirement — **N/C:** Not conducted

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CLASSIFICATION OF PRODUCT

Clause	BS EN 1303: 2015	Results	Remarks
7.0	Classification		
7.1	General – Classification shall be in accordance with the eight-digit coding system		
7.2	Category of use	Grade 1	Pass
7.3	Durability	Grade 6	Pass
7.4	Door mass	Grade 0	N/A
7.5	Suitability for use on fire-resistant / smoke control doors	Grade 0	N/C
7.6	Safety	Grade 0	N/A
7.7	Corrosion resistance and temperature	Grade A	Pass
7.8	Key related security	Grade 3	Pass
7.2.8	Attack resistance	Grade 0	N/A

First digit (Category of use) - Grade 1; for use by people with a high incentive to exercise care and with a small chance of misuse.

Second digit (Durability) - Grade 6; 100 000 test cycles.

Third digit (Door mass) - Grade 0; no door mass requirement

Fourth digit (Suitable for use on fire resistant / smoke control doors) - Grade 0; not approved for use on fire resistant / smoke control door assemblies)

Fifth digit (Safety) - Grade 0; no safety requirement

Sixth digit (Corrosion resistance and temperature) - Grade A; High corrosion resistance; no temperature requirement

Seventh digit (Key related security) - Grade 3; 15 000 Minimum number of effective differs / 5 Minimum number of movable detainers.

Eighth digit (Attack resistance) - Grade 0; no resistance against drilling, no resistance against mechanical attack.

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TEST RESULT

Product : LMI2852-01 Lock Cyclinder
Test Method : BS EN 1303: 2015

Clause	EN 1303:2015	Results
1	Scope	Informative
2	Normative references	Informative
3	Term and definitions	Informative
4	Requirements	
4.1	General	
4.2	Category of use - Key strength The key shall not break under the applied maximum torque of 2.5 Nm. After the test, the key shall be re-used to operate the same cylinder with a torque not exceeding 1.5 Nm.	**Pass** The key does not break after applying maximum torque of 2.5 Nm. Operate torque after test = 0.1 Nm
4.3	Durability After a number of test cycles specified in Table 1, it shall operate the cylinder with a new original key with a torque not exceeding 1.5 Nm	**Pass** Grade 6: 100,000 test cycles Before durability test: Operate torque = 0.1 Nm After durability test: Operate torque = 0.1 Nm
4.4	Door Mass There is no requirement on the cylinder related to the door mass	**N/A – Grade 0** No door mass requirement
4.5	Suitability for use on fire-resistant/smoke control doors The cylinder shall conform to the requirements of Annex A	**N/C – Grade 0** Not approved
4.6	Safety There is no requirement on the cylinder related to safety	**N/A – Grade 0** No safety requirement

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<table>
<tr><th>Clause</th><th>EN 1303:2015</th><th>Results</th></tr>
<tr><td>4.7</td><td colspan="2">Corrosion resistance and operation at extreme temperatures</td></tr>
<tr><td>4.7.1</td><td>Corrosion resistance

It shall be possible to operate the profile cylinder with its proper key using a maximum torque 1.5 Nm after being tested according to Grade 3 of EN1670</td><td>Pass

Grade A: 96 hours
Functioned correctly after exposure
Operate torque after test = 0.2 Nm</td></tr>
<tr><td>4.7.2</td><td>Operation at extreme temperatures

Operate the cylinder with its proper key using maximum torque of 1.5 Nm at both -25°C and +65°C</td><td>N/A

Grade A
No temperature requirement</td></tr>
<tr><td>4.8</td><td colspan="2">Key related security</td></tr>
<tr><td>4.8.1</td><td>Minimum number of effective differs

The minimum number of effective differs shall be as indicated in the table below:
<table>
<tr><th>Key related security grade</th><th>Minimum number of effective differs</th></tr>
<tr><td>1</td><td>100</td></tr>
<tr><td>2</td><td>300</td></tr>
<tr><td>3</td><td>15 000</td></tr>
<tr><td>4</td><td>30 000</td></tr>
<tr><td>5</td><td>30 000</td></tr>
<tr><td>6</td><td>100 000</td></tr>
</table></td><td>Pass

Grade 3

15,000 minimum number of effective differs.

Check in accordance with the manufacturer’s information.</td></tr>
<tr><td>4.8.2</td><td>Minimum number of movable detainers

The minimum number of movable detainers shall be as indicated in the table below:
<table>
<tr><th>Key related security grade</th><th>Minimum number of movable detainers</th></tr>
<tr><td>1</td><td>2</td></tr>
<tr><td>2</td><td>3</td></tr>
<tr><td>3</td><td>5</td></tr>
<tr><td>4</td><td>5</td></tr>
<tr><td>5</td><td>6</td></tr>
<tr><td>6</td><td>6</td></tr>
</table></td><td>Pass

Grade 3

5 number of movable detainers/pins

Check in accordance with the manufacturer’s information.</td></tr>
</table>

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<table>
<tr><th>Clause</th><th>EN 1303:2015</th><th>Results</th></tr>
<tr><td>4.8.3</td><td>Maximum number of identical steps

Maximum identical adjacent key steps are allowed as indicated in the table below:
<table><tr><th>Key related security grade</th><th>Maximum number of identical steps</th></tr><tr><td>1</td><td>100%</td></tr><tr><td>2</td><td>70%, max. 2 adjacent</td></tr><tr><td>3</td><td>60%, max. 2 adjacent</td></tr><tr><td>4</td><td>60%, max. 2 adjacent</td></tr><tr><td>5</td><td>60%, max. 2 adjacent</td></tr><tr><td>6</td><td>50%, max. 2 adjacent</td></tr></table></td><td>Pass

Grade 3

Max. number of identical steps: 60%
Max. number of identical adjacent steps: 2

Check in accordance with the manufacturer’s information.</td></tr>
<tr><td>4.8.4</td><td>Direct coding on key

Direct key coding shall not be permitted on keys for key related security Grade 3 to 6</td><td>Pass

Grade 3
Not permitted coding on key</td></tr>
<tr><td>4.8.5</td><td>Operation of security mechanism (inter-passing)

For key related security Grades 4, 5, and 6, it shall not be possible before and after the durability test has been completed, the cylinder with the next closest key to its own key using a torque of ($1.5\ ^{+0.2}_{0}$) Nm</td><td>Pass

Grade 3

<u>Before durability test:</u>
Reinsert the next closest key at 1.5Nm = No rotate able

<u>After durability test:</u>
Reinsert the next closest key at 1.5Nm = No rotate able</td></tr>
<tr><td>4.8.6</td><td>Torque resistance of plug/cylinder relevant to key related security

It shall not be possible to rotate the plug and/or cylinder in the key related security Grades 1 to 6, using the specified applied torque as indicated in Table below:
<table><tr><th>Key related security grade</th><th>Applied torque (Nm)</th></tr><tr><td>1</td><td>2.5</td></tr><tr><td>2</td><td>5</td></tr><tr><td>3</td><td>15</td></tr><tr><td>4</td><td>15</td></tr><tr><td>5</td><td>15</td></tr><tr><td>6</td><td>15</td></tr></table></td><td>Pass

Grade 3

The test sample broke after applied torque up to 6 Nm and unable to rotate. Therefore, the torque 15 Nm cannot be applied.</td></tr>
</table>

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Clause	EN 1303:2015	Results
4.9	Attack resistance Resistance against drilling and mechanical attack	**N/A – Grade 0** No resistance against drilling; No resistance against mechanical attack
5	Tests – General and test apparatus	Informative
6	Test methods – procedures	Informative
7	Classification	Refer to Page 3
8	Marking	Provided

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APPENDIX

Figure 1: Test sample of LMI2852-01 Lock Cylinder for SQO-6091.V1 program

APPENDIX B

VOID

----- END OF REPORT -----