


|                         |  |  |
|-------------------------|--|--|
| Issue No. 2             | الشركة السعودية للفحص والاختبار                                    |  |
| Issue Date : 01/10/2020 | SAUDI INSPECTION & TESTING CO. (SAITCO)                            |  |
| Revision No. 3          | ملحق 7 - أ: ملاحق متطلبات العملية- نتائج الاختبارات مختبر الكهرباء |  |
| Issue Date : 05/08/2023 | Appendix 7-A: LAB process REQ. TEST RESULTS -ELECTRICAL LAB        |  |

|   |                        |   |   |
|---|------------------------|---|---|
| Code of product in Lab :                    | F-144 –(EFF)           | --  |   |
| LAB DATA                                    |                        | بيانات المختبر  |   |
| Laboratory name                             | اسم المختبر            | Saudi Inspection & Testing Co.(SAITCO)  |   |
| Address                                     | العنوان                | 1st Industrial Area, St. No.4,5,6,7-Riyadh  |   |
| Country                                     | الدولة                 | Saudi Arabia  |   |
| Client Data                                 |                        | بيانات العميل   |   |
| Sample Date in                              | تاريخ استلام العينة    | 15/ 05 / 2023   |   |
| Date or period of tests                     | تاريخ / فترة الاختبار  | 16/ 05 / 2023   | 30/ 05 / 2023   |
| Date of report issue                        | تاريخ اصدار التقرير    | 29 / 11 / 2023  |   |
| Laboratory test report number               | رقم التقرير بالمختبر   | E-230576  |   |
| Client Name                                 | اسم العميل             | Awad adi Nahas Trading Co.  |   |
| Client Address                              | عنوان العميل           | Administration Building – 3rd Floor   Jeddah 21463<br>P.O. Box 11529 Kingdom of Saudi Arabia                    |   |
| Client Reference No. / Date                 | مرجع العميل            | 15/ 05 / 2023   |   |
| No of received Samples                      | عدد العينات المستلمة   | 1   |   |
| Sample Data                                 |                        | بيانات العينة   |   |
| Product description                         | وصف المنتج             | REFRIGERATOR  |   |
| Brand name or trademark                     | العلامة التجارية       | LIEBHERR  |   |
| Type or reference                           | النوع / المرجع         | UIK1510   |   |
| Country of Origin                           | بلد الصنع              | GERMANY   |   |
| Manufacture / factory Name                  | اسم المصنع             | Liebherr-Hausgeräte Lienz GmbH  |   |
| Manufacture / factory Address               | عنوان المصنع           | Dr.-Hans-Liebherr-Straße 1<br>9900 Lienz/ Austria   |   |
| Products Category                           | تصنيف المنتج           | Refrigerators, Refrigerator- Freezers and Freezers<br>–Energy Performance, Testing and Labeling<br>Requirements |   |
| Standard / TR No.                           | رقم المواصفة / اللائحة | SASO 2892:2018  | -   |
| Test case verdicts                          |                        | حالات الحكم على نتيجة الاختبار  |   |
| Conformity to articles tested               |                        | <input checked="" type="checkbox"/> Yes   | <input type="checkbox"/> No   |
| Test case does not apply to the test object |                        | Not Applicable  | N/A   |
| Test item does meet the requirement         |                        | Pass  | P   |
| Test item does not meet the requirement     |                        | Fail  | F   |



|                  |                   |                            |         |
|------------------|-------------------|----------------------------|---------|
| Test Report No : | E-230576          | Standard No: SASO IEC 2892 |         |
| Clause           | Requirement -Test | Result - Remark            | Verdict |

|   |  |  |   |
|---|--|--|---|
| 4 | <b>PRODUCT CATEGORIES</b>  |  |   |
|   | Refrigerating appliances are classified into categories as listed in Table 1.  | Applied Category 1   | -                                       |
|   | <b>Table 1 – Category Designation</b>  |  |   |
|   | 1  | Refrigerator with one or more fresh-food storage compartments        | P                                       |
|   | 2  | Refrigerator-cellar, Cellar and Specific beverage storage appliances | N                                       |
|   | 3  | Refrigerator-chiller and Refrigerator with a 0-star compartment      | N                                       |
|   | 4  | Refrigerator with a one-star compartment                             | N                                       |
|   | 5  | Refrigerator with a two-star compartment                             | N                                       |
|   | 6  | Refrigerator with a three-star compartment                           | N                                       |
|   | 7  | Refrigerator-freezer   | N                                       |
|   | 8  | Upright freezer  | N                                       |
|   | 9  | Chest freezer  | N                                       |
|   | 10   | Multi-use and other refrigerating appliances                         | N                                       |
|   | Refrigerating appliances that cannot be classified in categories 1 to 9 because of compartment temperature are classified in category 10   | Category 1   | -                                       |
|   | Refrigerating appliances are also classified into one or more climate classes as shown in Table 2.   | -  | -                                       |
|   | <b>Table 2 – Climate classes</b>   |  |   |
|   | <b>Class</b>   | <b>Symbol</b>  | <b>Ambient average temperature (°C)</b> |
|   | Extended temperate   | SN   | +10 to +32                              |
|   | Temperate  | N  | +16 to +32                              |
|   | Subtropical  | ST   | +16 to +38                              |
|   | Tropical   | T  | +16 to +43                              |
|   | Each category is defined by the specific compartment composition as specified in Table 3   | -  | P                                       |
|   | Nominal temperatures expressed in table 3 apply for determination of the EEI.  | Applied  | -                                       |
|   | The refrigerating appliance shall be capable of maintaining the required storage temperatures in the different compartments simultaneously | Capable  | P                                       |
|   | Multi-use appliances and/or compartments shall be capable of maintaining the required storage temperatures                                 | -  | N                                       |

|       |   |                |   |
|-------|---|----------------|---|
| 5     | <b>CRITERIA FOR APPLYING THE MINIMUM ENERGY PERFORMANCE STANDARD (MEPS)</b>   |                |   |
| 5.1   | Declaration of rated values   | -              | P |
|       | Rated capacity shall be expressed only in terms of liters(L)  | Expressed in L | P |
|       | Rated power (W)   | 6.29           | P |
|       | Energy Efficiency (%)   | -              | N |
|       | Annual Energy (kWh)   | -              | N |
| 5.2   | <b>Determining the Minimum Energy Performance</b>   | -              | P |
| 5.2.1 | Minimum energy performance are based on the Energy Efficiency Index (EEI)   | Applied        | - |
|       | Details for calculation of the EEI are given in annex B.  | -              |   |
| 5.2.2 | <b>Minimum Energy Performance Standard for Refrigerating Appliances</b>   |                |   |
|       | Refrigerating appliances with a storage volume equal to or higher than 10 liters shall comply with the energy efficiency index limits in Table 5. | -              | P |

|                  |                   |                            |         |
|------------------|-------------------|----------------------------|---------|
| Test Report No : | E-230576          | Standard No: SASO IEC 2892 |         |
| Clause           | Requirement -Test | Result - Remark            | Verdict |

|   |  |          |            |   |
|---|--|----------|------------|---|
| Table 5 – Minimum Energy Efficiency Index (EEI)                           |  |          | Measured   | - |
|   |  |          | EEI = 21.4 |   |
|   |  |          |            |   |
| Starting 6 months after announcement in the Official Gazette (Um Al-Qura) |  | EEI < 70 |            |   |
| Starting January 1 <sup>st</sup> , 2020                                   |  | EEI < 45 |            |   |

|                                     |  |        |                |   |
|-------------------------------------|--|--------|----------------|---|
| 5.3                                 | Acceptance criteria for labelling and market surveillance  |        |                |   |
|                                     | The energy label shall be accepted as valid when a sample unit(s) tested meets the criteria specified in table 6 |        | -              | - |
| Table 6 – Acceptance criteria       |  |        |                |   |
| Measured parameter                  | Verification tolerances  | Limit  | Measured Value | - |
| Gross (total) volume                | Measured shall not < 3% or 1L of Rated value (135L)  | 130.95 | 136L           | P |
| Storage volume                      | Measured shall not < 3% or 1L of Rated value (135)   | 130.95 | 136L           | P |
| Frozen-food storage volume (3***)   | Measured shall not < 10% of rated value ( )  | -      | -              | N |
| Energy consumption                  | (E <sub>24h</sub> ) Measured shall not >10% Of rate d value (1.096)  | -      | 0.166          | - |
| Power consumption (below 10 Liters) | Measured value shall ≤ 0.10W   | -      | -              | N |
| Specific beverage appliances        | RH x 1.10  | -      | -              | N |

|     |   |                  |   |
|-----|---|------------------|---|
| 6   | <b>Label and classification</b>   |                  |   |
| 6.1 | <b>Determining the energy efficiency class</b>  | Measured Class B | P |
|     | energy efficiency class for each product shall be determined as outlined in Table 7   | EEI = 21.4       | P |
| 6.2 | <b>Design and placement of the label</b>  |                  |   |
|     | The label shall be printed as illustrated in Figure 1. For all types of products within the scope of this standard, the label shall be visible and fixed on the most prominent part the of the product. Also, another label shall be fixed and non-removable on the product packaging.” | Provided         | P |
|     | energy efficiency classes shall each be represented as follows: with a fixed number of color-coded bars as outlined in Table 7 and Illustrated in Figure 1  | --               | P |
|     | The label must be 100 mm wide and 170 mm high   | Complied         | P |
|     | The label shall be on the most prominent part of the product packaging to be easily visible to the consumer   | -                | P |

|                  |                   |                            |         |
|------------------|-------------------|----------------------------|---------|
| Test Report No : | E-230576          | Standard No: SASO IEC 2892 |         |
| Clause           | Requirement -Test | Result - Remark            | Verdict |

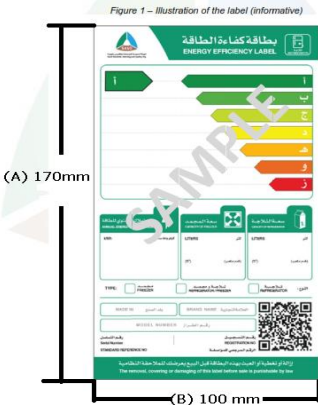
| Table 7 – MINIMUM VALUE OF THE ENERGY EFFICIENCY INDEX |              |   |               |
|--|--------------|---|---------------|
| Bar colour   | Energy class |   | EEI           |
| Dark green   | أ            | A | EEI < 20      |
| Green  | ب            | B | 20 ≤ EEI < 28 |
| Light green  | ج            | C | 28 ≤ EEI < 35 |
| Yellow   | د            | D | 35 ≤ EEI < 45 |
| Orange   | هـ           | E | 45 ≤ EEI < 55 |
| Red  | و            | F | 55 ≤ EEI < 70 |
| Dark Red   | ز            | G | EEI ≥ 70      |

|     | Energy Class  | Measured EEI                      |   |
|-----|---|-----------------------------------|---|
|     | B   | 21.4                              |   |
| 6.3 | Information and values contained on the label   |                                   |   |
|     | The fields (a), (b), (c), (d), (e), (f), (g) and (h) shall comply with the following requirements:  | -                                 | P |
|     | a) SASO Logo  | Provide                           | P |
|     | b) QR code  | -                                 | N |
|     | c) Energy efficiency classes  | C                                 | P |
|     | d) Storage volume (l)   | 135L                              | P |
|     | e) Frozen Storage Volume (l)  | -                                 | N |
|     | f) Annual Energy consumption  | 92                                | P |
|     | g)Category of Product   | Refrigerator                      | P |
|     | h)General product description (Brand name, Country of Origin, model number)   | LIEBHERR /Germany/                | P |
| 7   | Marking and instructions  |                                   |   |
| 7.1 | General information   |                                   |   |
|     | Information shall be marked on the nameplate of the refrigerator, refrigerator- freezer or freezer in (English) or (Arabic and English)         | Marked on the nameplate / English | P |
|     | The marking shall not be on a detachable part of the unit and shall be indelible, durable and easily legible.                                   | Not on a detachable part          | P |
| 7.2 | Nameplate information   | -                                 | P |
|     | The nameplate information shall include, for conformity to this standard the following information:   | -                                 | P |
|     | •Manufacturer name  | LIEBHERR                          | P |
|     | •Model number   | UIK 1510                          | P |
|     | •Country of origin  | Germany                           | P |
|     | •Product category   | 1                                 | P |
|     | •Rated power (W)  | 6.29                              | P |
|     | •Rated volume for food storage (L)  | 135L                              | P |
|     | •Rated volume for frozen food storage (L)   | -                                 | N |
|     | •Climate class: SN, N, ST or T  | SN-T                              | P |
|     | •Rated voltage (V)  | 220-240V~                         | P |
|     | •Classification (unit-less)   | -                                 | N |
|     | •Annual energy consumption (AEC) (kWh)  | 60.59 kWh/year                    | P |
| 7.3 | Instruction sheet   | Instruction manual was provided   | P |
|     | An instruction sheet or manual in (Arabic) or (Arabic and English) shall be delivered with each Refrigerator, refrigerator- freezer or freezer. | English / Arabic                  | P |
|     | Tables, drawings and circuit diagrams may be depicted in English only   | Provided                          | P |

|                  |                   |                            |         |
|------------------|-------------------|----------------------------|---------|
| Test Report No : | E-230576          | Standard No: SASO IEC 2892 |         |
| Clause           | Requirement -Test | Result - Remark            | Verdict |

|  |  |                |   |
|--|--|----------------|---|
|  | The instruction sheet or manual shall include the following information as a minimum:  | -              | P |
|  | a.Supplier's name or trade mark  | LIEBHERR       | P |
|  | b.Supplier's model identifier  | UIK 1510       | P |
|  | c.Category of the refrigerating appliance Category of the refrigerating appliance model in accordance with table 1 and climate classes in accordance with table 2. | 1              | P |
|  | d.Energy efficiency class of the model in accordance with table 7  | B              | P |
|  | e.Annual energy consumption (AEC) (kWh)  | 60.59 kWh/year | P |
|  | f.Storage volume of each compartment and applicable star categories in accordance with Table 3, if any.  | marked         | P |
|  | g.The design temperature of 'other compartments' within the meaning of Annex B For special beverage storage compartments   | -              | N |
|  | h.The mention 'frost-free' for the relevant compartment(s)   | -              | N |
|  | i.Power cut safe "X" h' defined as 'temperature rise time'   |                | N |
|  | j.Freezing capacity' in kg/24 h  | -              | N |
|  | k.Climate class' in accordance with Clause 4 Table 2   | SN,T           | P |
|  | <sup>l</sup> If the model is intended to be a built-in appliance, an indication to this effect   | -              | P |

### Design and Dimension of Energy Efficiency Label

|  | Figure 1 – Illustration of the label (informative)                                  | Point to measure | Required value (mm) | Measured (mm) | verdict |
|--|---|------------------|---------------------|---------------|---------|
|  |  |                  |                     |               |         |
|  |   | A                | 170                 | -             | -       |
|  |   | B                | 100                 | -             | -       |

|                  |                   |                            |         |
|------------------|-------------------|----------------------------|---------|
| Test Report No : | E-230576          | Standard No: SASO IEC 2892 |         |
| Clause           | Requirement -Test | Result - Remark            | Verdict |

| ANNEX B   | Calculation of the Energy Efficiency Index (EEI)   |     |                           |                                  |     |                       |     |
|---|--|-----|---------------------------|----------------------------------|-----|-----------------------|-----|
| B.1   | The Annual Energy Consumption of refrigerating appliance is compared to its Standard Annual Energy Consumption.              |     |                           |                                  |     |                       |     |
| $EEI = 100 \times AE_C / SAE_C$   |  |     | AE <sub>C</sub>           | SAE <sub>C</sub>                 |     |                       |     |
|   |  |     | 60.59                     | 282.97                           | -   |                       |     |
|   |  |     | EEI = 21.4                |                                  | P   |                       |     |
|   | AE <sub>C</sub> = Annual Energy Consumption of the refrigerating appliance   |     |                           | -                                | P   |                       |     |
|   | SAE <sub>C</sub> = Standard Annual Energy Consumption of the refrigerating appliance   |     |                           | -                                | P   |                       |     |
| B.2   | Determination of the Annual Energy Consumption AEC   |     |                           |                                  |     |                       |     |
|   | Annual Energy Consumption (AEC) is calculated in kWh/year  |     |                           |                                  |     |                       |     |
| $AE_C = 365 \times E_{24h}$   |  |     | 365                       | E <sub>24h</sub> = 0.166 kwh/24h | -   |                       |     |
|   |  |     | AE <sub>C</sub> = 60.59   |                                  | -   |                       |     |
|   | E <sub>24h</sub> = energy consumption of the refrigerating appliance in kWh/24h  |     |                           | 0.166 kwh/24h                    | -   |                       |     |
| B.3   | Determination of the Standard Annual Energy Consumption (SAE <sub>C</sub> )  |     |                           |                                  | P   |                       |     |
|   | Standard Annual Energy Consumption (SAEc) (kWh/year)   |     |                           |                                  |     |                       |     |
| $SAE_C = V_{eq} \times M + N + CH$  |  |     | V <sub>eq</sub>           | M                                | N   | CH                    |     |
|   |  |     | 163                       | 0.233                            | 245 | 0                     | P   |
|   |  |     | SAE <sub>C</sub> = 282.97 |                                  |     |                       | -   |
|   | V <sub>eq</sub> = equivalent volume of the refrigerating appliance   |     |                           | -                                | P   |                       |     |
|   | CH= 50 kWh/year for refrigerating appliances with a chill compartment with a storage; otherwise, CH is equal to 0 kWh/y22ear |     |                           | -                                | N   |                       |     |
|   | M and N values are given in Table B3 for each refrigerating appliance category.  |     |                           | 0.233/ 245                       | -   |                       |     |
| B.4   | Calculation of the Volume equivalent used for the calculation of the Standard Annual Energy Consumption SAE <sub>C</sub>     |     |                           |                                  |     |                       |     |
| $V_{eq} = \left[ \sum_{c=1}^{c=n} V_c \times \frac{(25 - T_c)}{20} \times FF_c \right] \times CC \times BI$ |  |     | N =2                      | Total Vc                         | Vc  | $\frac{(25-T_c)}{20}$ | FFc |
|   |  |     | Freezer                   | -                                | -   | 2.15                  | 1.2 |
|   |  |     | Fresh Food                | 136                              | 136 | 1                     | 1   |
| Total Vc  |  | CC  | BI                        | Veq = 163                        |     |                       |     |
| 136   |  | 1.2 | 1                         |                                  |     |                       |     |
|   | n= number of compartments  |     |                           | -                                | -   |                       |     |
|   | Vc = storage volume of the compartment(s)  |     |                           | -                                | -   |                       |     |
|   | Tc = nominal temperature of the compartment(s) (Table 3)   |     |                           | -                                | -   |                       |     |
|   | 25-Tc/ 20 = thermodynamic factor (Table B1)  |     |                           | -                                | -   |                       |     |
|   | FFc, CC, BI = volume correction factors (Table B2)   |     |                           | -                                | -   |                       |     |

Remarks :



|                  |                   |                            |                            |
|------------------|-------------------|----------------------------|----------------------------|
| Test Report No : | E-230576          | Standard No: SASO IEC 2892 |                            |
| Clause           | Requirement -Test |                            | Result - Remark<br>Verdict |

Photo No. 1 (Marking)



|   |   |  |   |   |
|---|---|--|---|---|
| <b>UIK 1510 Index 21C / 111</b><br><b>Service-Nr./No.Service: 0988196-03</b>  |   |  |   |  |
| KUEHLSCHRANK-EINBAUMODELL-INTEGRIERT-UNTERTISCH<br>REFRIGERATOR-BUILT-IN-INTEGRATED-UNDER-COUNTER<br>FRIGORIFICO-EMFOTRABLE-INTEGRADO-BAJO ENCIMERA |   |  |   |   |
| Klasse/Class<br>Classe/Clase<br><b>SN-T</b>   | Ap-Type/AP-Type<br>AP-Type/AP-Tipo<br><b>1 6321 4</b> | Bruttoinhalt/Gross Capacity<br>Volume Brut/Capacidad Bruta<br><b>141 l</b> | Gefriervermögen/Freezing Capacity<br>Pouvoir de Congel./Capac./Congeladora<br><b>R600a: 42g</b> |   |
| Nutzinhalt<br>Net Capacity<br>Volume Utile<br>Capac. Util   | Ges<br>Tot<br>Tot<br>Tot<br><b>135 l</b>              | / K<br>/ R<br>/ R<br>/ F<br><b>/ 135 l</b>                                 | <b>Serial-Nr. 99.999.999.9</b><br><b>1.2 A 220-240 V ~ 50/60 Hz</b>                             |   |
| Product category <b>1</b><br>The Rated Power <b>6.29</b><br>Annual energy consumption <b>60.59 kWh/year</b>   |   |  |   |   |
| Insulation (Pentane)<br>Made in Germany<br>20230816   |   |  |   |   |
|    |   | Liebherr-Hausgeräte GmbH<br>Memminger Str. 77-79<br>D-88416 Ochsenhausen   |   |   |

Photo No.2 ( General view and Package)



|                  |                   |                            |         |
|------------------|-------------------|----------------------------|---------|
| Test Report No : | E-230576          | Standard No: SASO IEC 2892 |         |
| Clause           | Requirement -Test | Result - Remark            | Verdict |

Conformity Decision is usually included in the report, unless the agreement states otherwise by the client.

Results Notes: The acceptance criterion is based on :

A-The relevant TR Requirements ☐

B-The relevant standard specifications ☐

C- Manufacturer's manual (product technical data sheet) ☐

D- Customer requirements ☐

Acceptance Rule is based on:

Special Case

Rejection Rule (Failing) is based on:

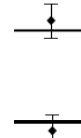
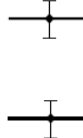
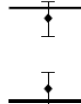
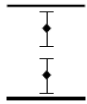
A- The measured value (+) measurement uncertainty value is less than the maximum required to criteria of acceptance.  
B- The measured value (-) measurement uncertainty value is greater than the minimum required to criteria of acceptance.

Accept when a confidence level of less than 95% is acceptable

May be accept if:  
Measured result  $\leq$  the upper limit  
Measured result  $\geq$  lower limit  
May be rejected if :  
measured value < the upper limit  
measured result > lower limit

Reject when a confidence level of less than 95% is acceptable

A- The measured value (+) measurement uncertainty value is greater than the maximum required to criteria of acceptance.  
B- The measured value (-) measurement uncertainty value is less than the minimum required to criteria of acceptance.



♦ = measurement result with agreed method

I = uncertainty interval of agreed method

☒ The sample passed all the above-mentioned tests in accordance with the requirements of the product

☐ The sample passed all the tests mentioned above in accordance with the requirements for the product, except for the ..... test where the measured value does not meet the requirements of the product mentioned in the attached standard specifications.

The result is for the sample referred to in the report, which has been tested only and is only representative of itself.

Accreditation statues :

All tests are accredit : ☐

All tests are accredit except:

REMARK :

SOFT COPY OF THE CONTROL TEST RESULT SHEET IS AUDITED BY THE LAB SUPERVISOR

|      | Inspected by   | Lab supervisor/ Reviewer | Technical Manager |
|------|----------------|--------------------------|-------------------|
| Name |                |                          |                   |
| Sign |                |                          |                   |
| Date | 30 / 11 / 2023 | 30 / 11 / 2023           | 30 / 11 / 2023    |

"End of Report"

