

## UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION ORGANISATION DES NATIONS UNIES POUR LE DEVELOPPEMENT INDUSTRIEL

## **CERTIFICATE OF COMPLETION**

PROJECT:

UNIDO 140147 - INDIVIDUAL PROJECT

DATE APROOVED: 29 January 2020

AGENCY:

UNIDO

National consultant: Edgard Soares

**CONTRACTOR:** 

ELETROFRIO REFRIGERAÇÃO LTDA.

LOCAL GOVERNMENT:

NATIONAL OZONE: UNIT OF THE BRAZILIAN GOVERNMENT

Issued by:

United Nations Industrial Development Organization - UNIDO

AGENCY (IA)

Addressed:

Eletrofrio Refrigeração LTDA

Rua João Chede, 1599 Curitiba, PR, Brazil

## CONTRACTOR

This Certificate of Completion applies to all work conducted under the Project Document approved by UNEP/OzL.Pro/ExCom/75/85 - Decision 75/43:

UNIDO 140147 - INDIVIDUAL PROJECT - Brazil's HCFC phase-out management plan:

HCFC-22 Phase-Out in the Manufacturing of Commercial Refrigeration Equipment for the Retail Sector of the enterprise Eletrofrio Refrigeração LTDA.

The work which this Certificate applies has been inspected by the National consultant in presence of authorized representatives of IA and CONTRACTOR and the work is hereby declared to be completed in accordance with the aforementioned project document.

29 January 2020



## **RESPONSABILITIES**

From the date of completion, the responsibilities between IA and CONTRACTOR for security, operation, safety, maintenance, utilities, insurance, warranties and guarantees shall be as follows:

IA: As of Wednesday, 29 January 2020, all of the aforementioned responsibilities shall be passed from UNIDO to Eletrofrio Refrigeração LTDA., located in Curitiba, PR, Brazil.

CONTRACTOR: As of Wednesday, 29 January 2020, all of the aforementioned responsibilities shall be assumed by Eletrofrio Refrigeração LTDA., and the CONTRACTOR shall hold UNIDO harmless.

The following is a list of complete activities carried out under the conversion to non-HCFC technology in the manufacturing of refrigeration equipment of the enterprise Eletrofrio Refrigeração LTDA. as of Wednesday, 29 January 2020:

- Conversion technology defined: Hydrocarbons (R-290);
- Technical assistance for development and test of the modular equipment using R-290;
- Purchasing of equipment for refrigerant handling and safety:
  - o 1 x R-290 charging unit with built-in supply pump;
  - o 1 x leak detectors for R-290;
  - o 1 x Ultrasonic Welding tool for sealing the process tube;
  - Recovering unit for components with refrigerant leak;
  - o 1 x Explosion proof ventilation system;
  - o 1 x Set of HC sensors and alarms;
  - Grounding and anti-static floor coating;
- Civil work to build the charging area infrastructure;
- Demonstration project: installation of 3 modular chillers with all required equipment to run the refrigeration system in a supermarket located in Curitiba (Brazil) for technology demonstration purposes;
- 7,1t ODP phase out.

Executed on behalf of UNIDO by National Consultant on Wednesday, 29 January 2020.

Mr. Edgard Soares Pinto Neto National Consultant – UNIDO

CONTRACTOR accepts this Certificate on Wednesday, 29 January 2020

By:

Mr. Rogerio Marson Rodrigues

Engineering Manager - Eletrofrio Refrigeração LTDA