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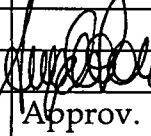
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  SISTEMI		
	PLANT	PHASING OUT OF ODS AT REFRIGERATOR PLANT OF YAKH CHAVAN MANUFACTURING CO. - ISLAMIC REPUBLIC OF IRAN
	CUSTOMER	UNIDO FOR YAKH CHAVAN MANUFACTURING CO.
	CONTRACT N.	UNIDO CONTRACT 97/087 PROJECT MP/IRA/97/201
	JOB N.	2298220010

**PHASING OUT OF ODS AT
REFRIGERATOR PLANT OF
YAKH CHAVAN
MANUFACTURING CO.**

FINAL REPORT




D					
C					
B					
A	07/04/05	FINAL ISSUE	A. LONGONI		
Rev.	Dat	Description	Prepared	Controll.	Approv.

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1. INTRODUCTION

With this document Contractor is going to describe the works performed at the plant site for the conversion of Yakh Chavan Manufacturing Co. to phase out ODS in the production of Domestic Refrigerators and Freezers.

Hereafter we briefly summarise the activities performed under the Contract according to the Term of Reference

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2- VISIT TO THE PROJECT SITE AND LAY OUT OF THE PLANT (STEPS 1,2,3 OF THE TERMS OF REFERENCE)

After the award of the order, the Contractor visited the Counterpart in October 1998 in order to verify the conditions of the site and to identify the best engineering solutions for the conversion of the existing foaming lines.

During the visit, the Contractor discussed and checked with the Counterpart the following main subjects:




A - Technical details regarding the supply of the equipment; in particular the Contractor emphasised the Premix Units, the Polyol and Isocyanate Modules, Safeties of the plant (as i.e.: gas sensors, exhaust system with fan groups), cyclopentane storage tanks and relevant accessories.

B - The suitable sites where the new equipment had to be installed and the required modification to the new layout.

Regarding the C5 storage tanks, the Contractor inspected and defined the areas where they had to be placed.

After the visit the Contractor prepared the first progress report (acknowledged in receipt by Project Counterpart on Dec 1998, 1st) including the preliminary layout, the Basic requirements and specifications for the site Preparation, the obligation and responsibilities breakdown and the Work Plan.

The first progress report covered all the subjects listed during the discussion and gave to the Counterpart, as much as detailed as possible at that phase of the project, a list of all the works and materials to be provided by them.

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3 TECHNICAL SPECIFICATION AND ENGINEERING DESIGN FOR THE PLANT ERECTION (STEPS 5,6 OF THE TERMS OF REFERENCE)



In June 1999 the Contractor provided the Final Technical Documentation for the Conversion of the plant as attachment to 2nd Progress Report and representing the above the essence of Implementation of the safety strategy (step 6 of the Terms of Reference).

The above mentioned documentation included the following kind of detailed drawings and specifications:

- civil works for the storage tanks and foaming lines
- grounding of the equipment
- piping arrangements and support details
- piping sketches
- box buildings construction
- ventilation construction
- cable run lay-out
- gas sensor positioning
- electrical drawings
- safety requirements

All the documentation was discussed with the Counterpart and some modifications have been agreed during in the later period.

In April 2001 the Contractor provided the Final Technical Documentation for the model redesign, prototype testing & supervision as attachment to 3rd Progress Report (step 5 of the Terms of Reference).

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4. DELIVERY OF EQUIPMENT, INSTALLATION, COMMISSIONING, TRIAL PRODUCTION OF THE FIRST MODELS, TEST RUN OF PRODUCTION (STEPS 7,8,10,11 OF THE TERMS OF REFERENCE)

In June 1999 all the new equipment have been shipped.

The installation started in Jan 2000, after the customs clearance of all the equipment.

The Contractor engineers followed the installation phase including the supervision of the job at Counterpart charge.

The Contractor actions basically concerned the following zone of the modified plant:




- Cyclopentane storage tanks areas
- Wet areas
- Process fluid connection piping between wet and dry area
- Cabinets /doors foaming areas
- Safeties of the plants (ventilation system, fire fighting system et cetera)

The installation phase was completed in May 2004.

After the installation, the Contractor performed the Commissioning and start-up phase of the modified plant in accordance with the contract.

The commissioning, trial production and test run phases mainly concerned the following operations:

- Pneumatic and Electric circuit check
- Grounding check
- Flushing of the tanks and the piping with nitrogen
- Pressure test
- Check of the operating sequences
- Operating test
- Service simulation test
- Setting start-up parameters
- Foaming quality check
- Performance test

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The training on the job activities has been carried out at the beginning of commissioning phase.

In October 2004 the commissioning phase was completed and the Counterpart started the production.

5. TRAINING ON THE JOB, SAFETY INSPECTION AND CERTIFICATION, FINAL REPORT, POST CONTRACT MONITORING ACTIVITIES (STEPS 9,12 OF THE TERMS OF REFERENCE)

The training on the job activities has been carried out at the beginning of commissioning phase.

The safety pre-inspection has been performed by TUV ULM in January 2005.

Referring to the content of Draft Final Report dtd 28/02/05, since there Project Counterpart did not confirm in written within the scheduled date the completion of corrective actions in their responsibility according to TUV report, stated that this was a necessary condition for any further site-action by Cannon Bono Sistemi side, conclusion is that the overall scope of TUV report will not be met .

In order to cooperate with UNIDO/Project Counterpart and complete in a satisfactory and alternative way the Project scope implementation, Cannon Bono Sistemi is providing UNIDO with the attached Safety statement.

SAFETY STATEMENT

CANNON GROUP

CERTIFIES THAT THE EQUIPMENT SUPPLIED WITHIN

U.N.I.D.O. PROJECT NO. MP/IRA/97/201

U.N.I.D.O. CONTRACT NO. 98/087/VK

FOR THE CONVERSION OF THE EXISTING PRODUCTION PLANT IN

**YAKH CHAVAN
IRAN**

TO USE CYCLOPENTANE AS BLOWING AGENT

IS IN ACCORDANCE WITH THE STANDARDS AND THE CODES OF
THE COUNTRIES OF ORIGIN OF THE GOODS


CANNON GROUP

Peschiera Borromeo, 30.03.2005