

## **Visit to Bhimavaram for promoting Japanese energy efficient technology in the seafood processing industry**

Day 1: 15/10/2018

Meeting between representatives of processing units (Kadar Exports, Ananda Exports, Universal Cold Storage, Growel Processors), Japanese technology suppliers Mayekawa, IGES and TERI. Mayekawa made a presentation on their latest refrigeration technologies such as ammonia-CO<sub>2</sub> refrigeration system, dehumidifier, heat pump and cold storage doors (thermo shutters). Industry expressed keen interest in dehumidifier and thermo shutter technologies.



Day 2: 16/10/2018

### **Visit to Kadar**

Walk through visit of the plant was done by Mr H Egashira and Mr Pushkar Sharma, Mayekawa; Mr V. Vaidhyanathaswamy, Frick India Ltd.; Dr. Abdessalem Rabhi, Institute of Global Environment Strategies (IGES) and Mr Rudhi Pradhan, TERI. The plant has a capacity of 50 tonnes per day (tpd) of shrimp processing. The different processes like receiving of shrimp, beheading, size grading, peeling, cutting, freezing, cooking and packing were explained to the team by the representative from the unit. The unit also has a cold storage and oil fired boiler used for the cooking application. Mayekawa recommended ammonia-CO<sub>2</sub> refrigeration system and heat pump in place of boiler. Different process parameters were collected for estimating the feasibility of replacing the present technologies with more energy efficient technologies.



## Visit to Universal cold storage



Representatives from Universal cold storage (UCS) took the team to the different sections of the plant. The plant has a capacity of 30 tpd of shrimp processing. Main load of the plant includes the Individual Quick Freezing (IQF) and the plate freezer section. The capacity of their present cold storage is low and hence the unit stores part of the processed shrimp in hired cold storages outside. The unit presently has reciprocating compressors. They are interested in replacing them with screw compressors to reduce energy consumption.

## Meeting with MPEDA

A meeting with Dr. Biak, Assistant Director, MPEDA was held. TERI briefed him on the objective of the visit. Mayekawa discussed the different energy efficient technologies for cooling and heating applications. IGES narrated the collaboration and put emphasis on creating awareness among the industry. Dr. Biak briefed the team about various activities and financial assistance schemes of MPEDA for promoting marine export. MPEDA assured their cooperation in creating consciousness among local industries about the Japanese energy efficient technologies.



Day 3: 17/10/2018

### **Feasibility study of Ananda Exports**

The team had a preliminary meeting with the management of Ananda Exports. Different process areas of the unit were also visited. The management of Ananda put forward the issues they face and improvement they want in their operation. They mentioned that they are facing problem of moisture condensation in the processing area. They also expressed interest on exploring heat pump for their heating requirement. The plant also showed interest in thermo shutter technology. In addition to this, Mayekawa also suggested replacing their ammonia based system to ammonia brine system.

