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22493

Huari

MANUFACTURE AND INSTALLATION OF SAFETY BOXES
FOR THE DOOR AND CABINET FOAMING LINE

REPORT

UNIDO Project Number: MP/CPR/96/042

UNIDO CONTRACT No. 98/267



ZHEJIANG HUARI GROUP COMPANY LTD

Data: SEPTEMBER 26, 2000

Our company finished the manufacture and installation of safety boxes for the door and cabinet foaming lines in May, 2000 according to Contract No.98/267. The status report on the conversion project, that is to say, the final report, is as follows:

1. Working processes

The work contains two safety boxes separately built on the door and cabinet foaming lines as a result of technical documentation provided by Perros including drawings. Since the signature of the Contract dated November, 1998, our company has been greatly involved in the work in terms of personnel and material supplies and the working process is in accordance with the Contract to most degree, for instance, we finished building the framework of safety box in the early December of 1998. However, the work of conversion equipment construction stop to advance as scheduled on account of DKK and neither did other relevant work, therefore, the whole project is delayed.

In the late January of 2000, the conversion project resumed after Dkk began to carry out its duties with the intermediation of the UNIDO. We completed the work of safety boxes in March, 2000 after a month-long on-site equipment installation. Following that, suggestions by a Perros after-sales engineer after his visit to our company were made that part of exhaust system of safety boxes were not in accordance with the requests of TUV and additional air suction inlets were needed, that is to say, 16 perpendicular air suction pipes in the cabinet foaming line were supplemented and so did 4 parallel exhaust pipes in the door foaming line. To speed up the working process, we have made amendments required on the Perros-made safety box as well as our self-made safety box. In July, 2000 the additional solutions for safety boxes were confirmed by TUV engineers. Until now, the whole equipment has been operated for over 3 months.

2. The work in details

1) The materials used in the safety box on the cabinet foaming line are as follows:

- Assembly structure consisting of 80*80*3 steel pipes and other components available on terms of its framework;
- Outer separation board built with 50mm-thick polyurethane foaming-inserted panels and aluminum alloy in material, and 20 doors and movable doors applied of aluminum alloy and safety glass ;
- Exhaust pipes consisting of 1.2mm zinc-coating steel sheets and aluminum-made air lines ,150mm in diameter, and 16 perpendicular air suction pipes made of 1.2mm zinc-plated steel sheets later added for the requirement of TUV;
- Lighting system adopting the solution of natural light associated with lamp light, light absorption system, 80 mm² ,made of aluminum alloy and safety boxes with its location in the upper-mid of the safety box ,and 5 ex-proof lamps installed for the use of auxiliary lighting both in day and at night;
- Ground system ,that is to say, metal parts including framework, separation boards, exhaust piping and aluminum alloy sheets with their grounding contacts connected according to specified requirements;
- 8 cabinet entrances and exits adopting 3 mm-thick PVC curtains

2) The materials used in the safety box on the door foaming line are as follows:

- Assembly structure consisting of 80*80*3 steel pipes and other components available on terms of its framework;
- Outer separation board built by 50mm-thick polyurethane -inserted panels and the aluminum alloy material, and 4 doors and movable doors applied of aluminum alloy and safety glass ;

- Exhaust pipes consisting of 1.2mm-thick zinc-plated steel sheets and aluminum-made air lines ,150mm in diameter, and 4 parallel air suction pipes made of 1.2mm-thick zinc-plated steel sheet;
- Lighting system adopting the solution of natural light associated with lamp light, safety box doors/movable doors made of aluminum alloy and safety glass with a good light absorption effect , and 5 ex-proof lamps installed for the use of auxiliary lighting both in day and at night;
- Ground system ,that is to say, metal parts including framework, separation boards, exhaust piping and aluminum alloy sheets with their grounding contacts connected according to specified requirements;
- door entrances/exits adopting 3 mm PVC curtains

3) Main materials consumed are as follows:

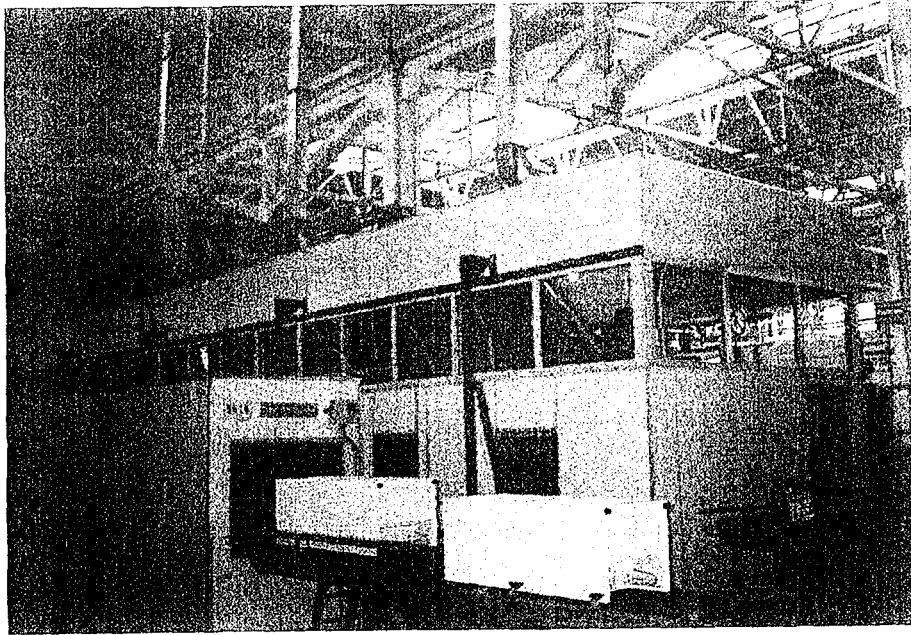
- Aluminum alloy materials used :about 2.56 tons;
- 10 mm-thick steel sheets used : 0.35 tons;
- 80*80*3 steel pipes used : 3.1 tons;
- 1.2 mm-thick Zinc-plated steel sheets used : 45mm²;
- 50 mm-thick polyurethane-inserted panels used: 302.5 mm²;
- Safety glass used: 275 mm²;
- Aluminum air lines used with 150mm in diameter;
- 3mm-thick PVC curtain used :12 mm²;
- Standard components available in numbers including bolts, nuts and screws

3.CONCLUSION

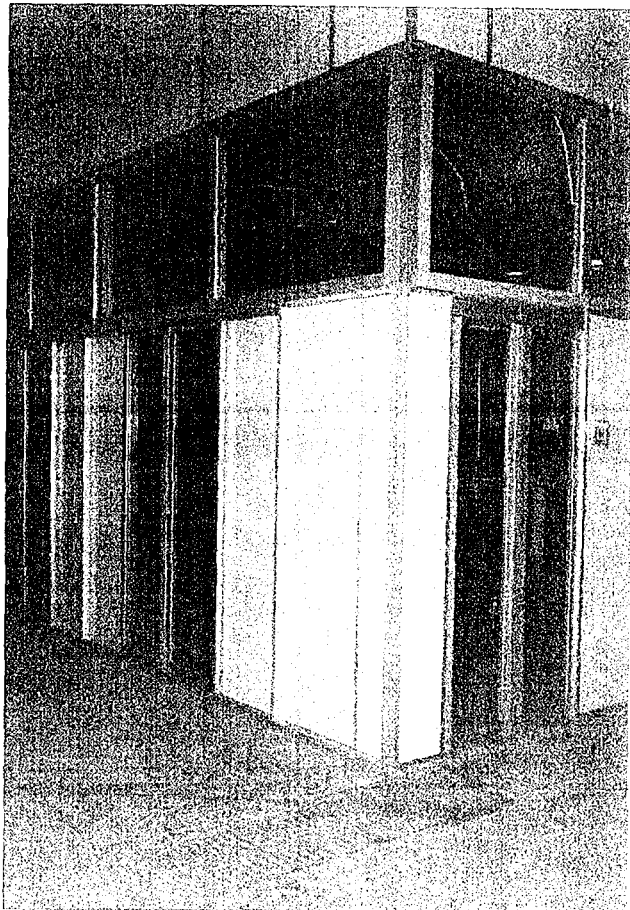
- 1) We finished the manufacture and installation of safety boxes in the door and cabinet foaming lines this April according to the Contract No. 98/267 and have been operating the two lines after they were confirmed by TUV in July,2000.

2) We share no responsibility with DKK in terms of delay of the implementation of the Contract.

Attached herewith please find some pictures of safety boxes for the reference of the officers in the headquarter of UNIDO.

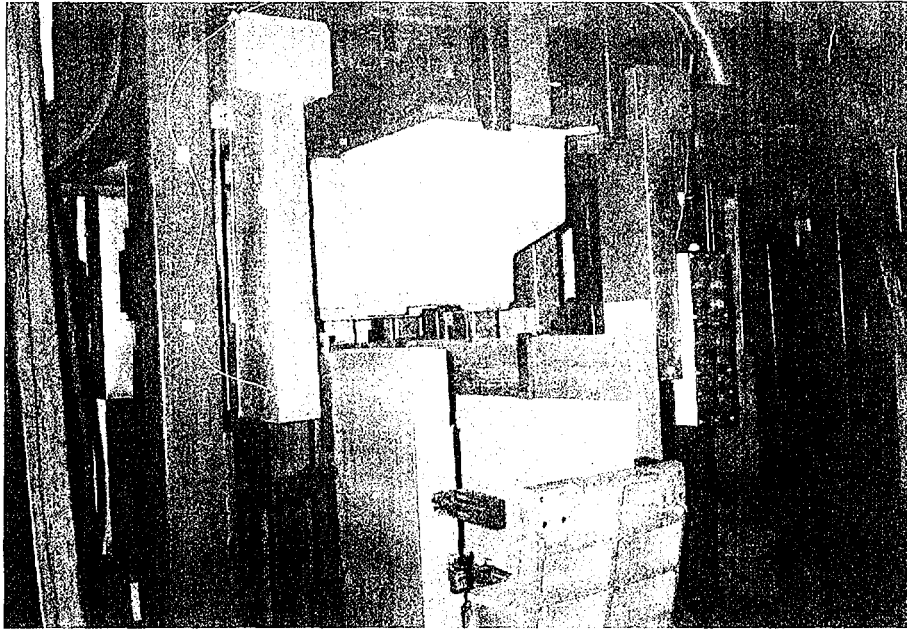


a full view of the safety box on the cabinet foaming line

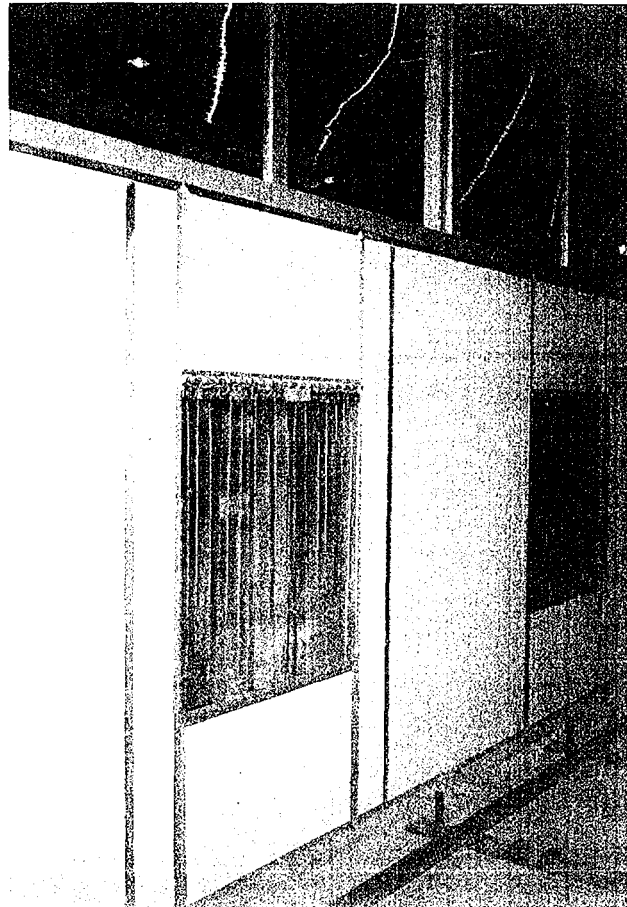


view of the safety box on the cabinet foaming line

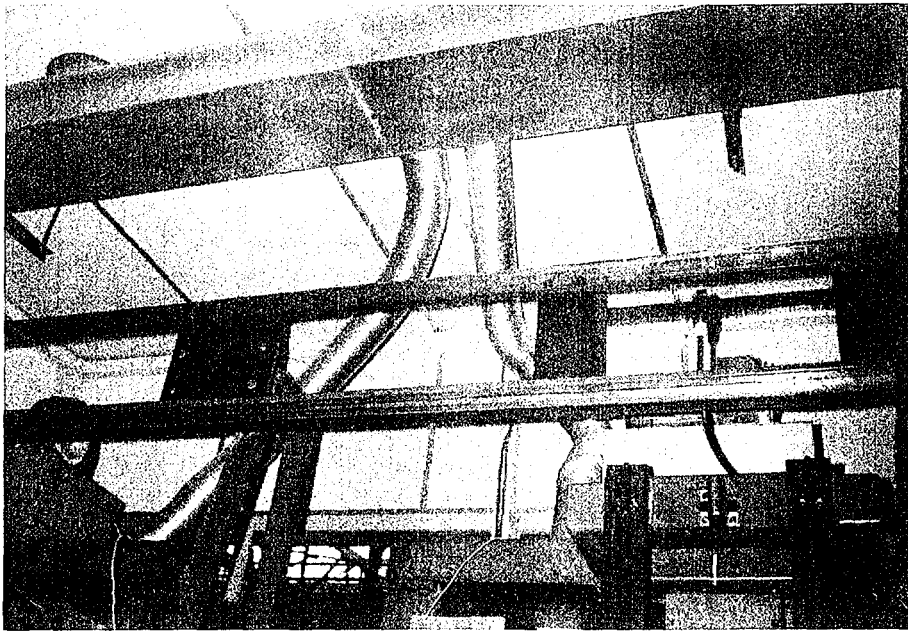
(part 1: doors under the nature light)



exhaust system of the safety box on the cabinet foaming line (newly added)



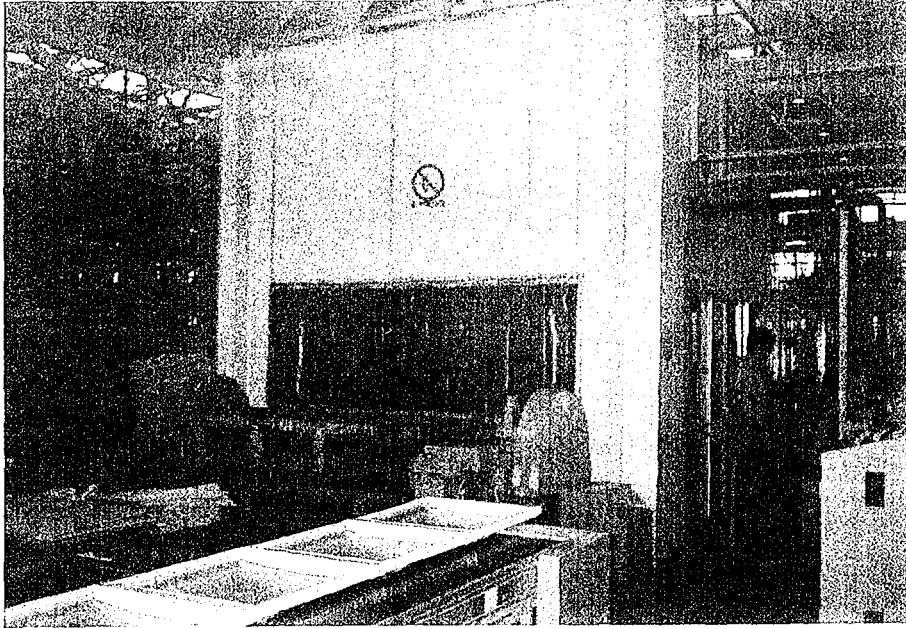
view of the safety box on the cabinet foaming line (part 2: cabinet entries)



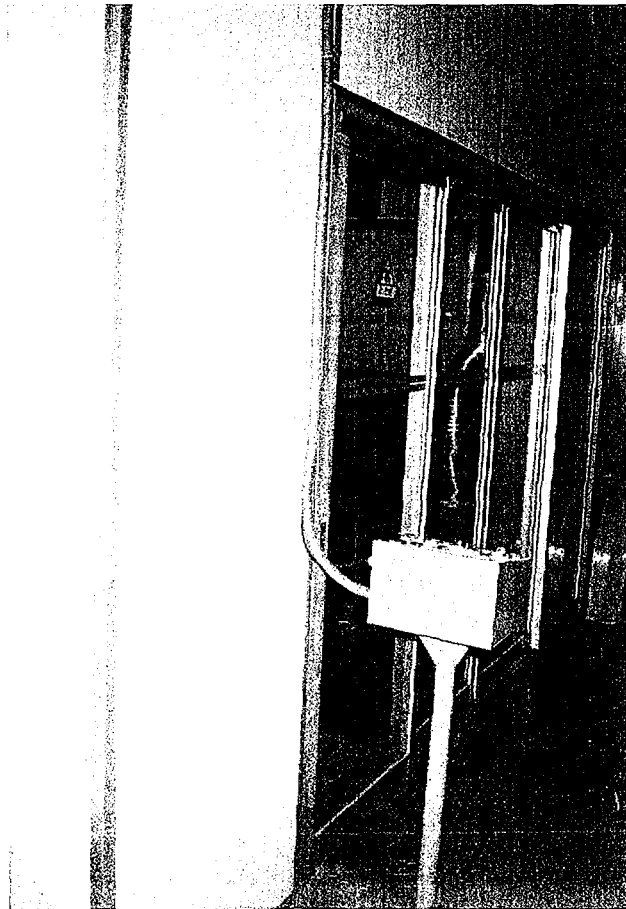
exhaust system of the safety box on the cabinet foaming line



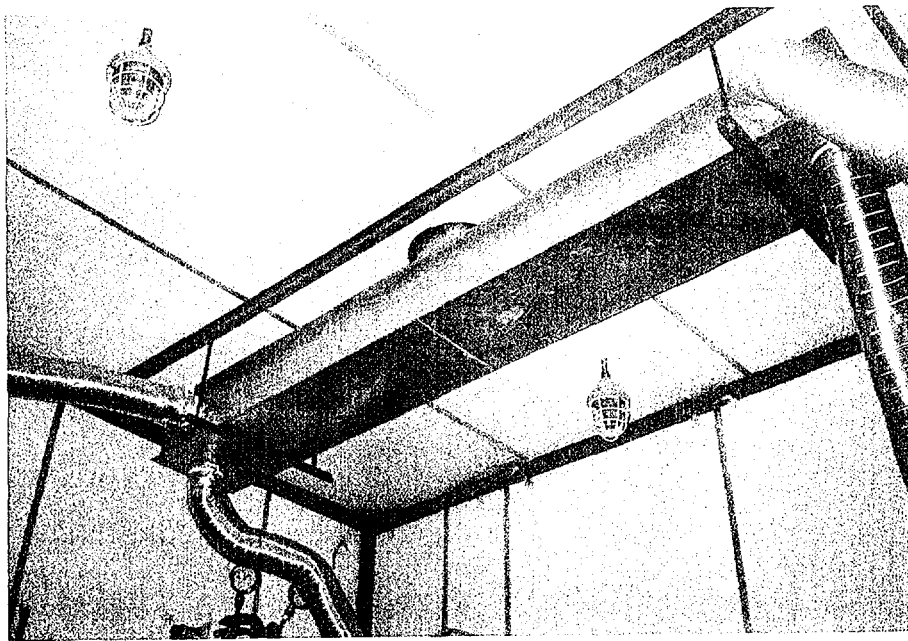
lighting system of the safety box on the cabinet foaming line



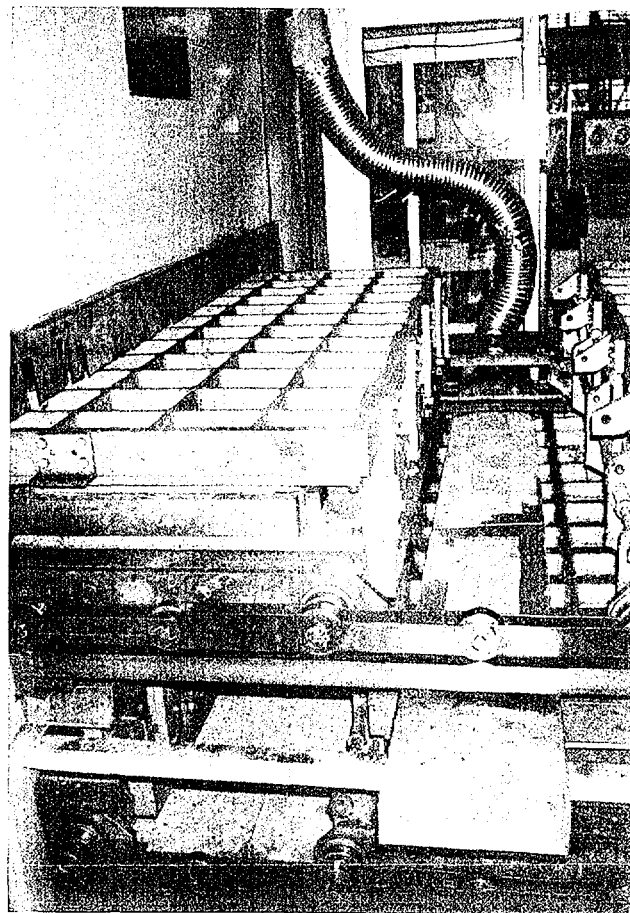
a full view of the safety box on the door foaming line



a partial view of the safety box on the door foaming line



the top exhaust system of the safety box on the door foaming line



the exhaust system of the safety box on the door foaming line