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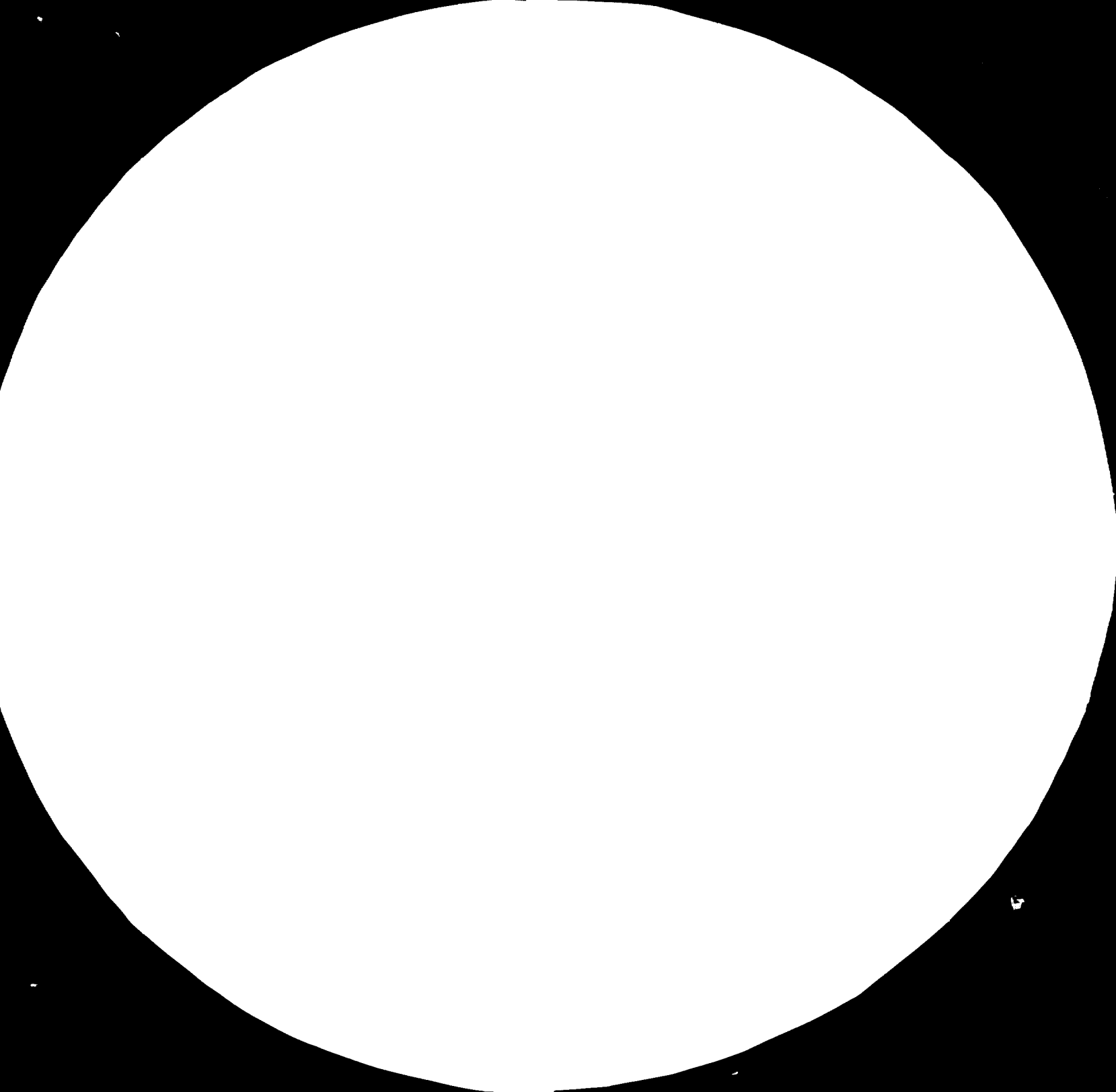
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

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FINAL REPORT
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[Nepal. Pilot demonstration foundry plant.]

Contract T81/79

UNIDO Project UNDP/NEP/79/001

June 1983

General

The contract came into effect on November 23, 1981.
The commissioning was completed on March 3, 1983.
all according schedule.

The whole project is reviewed hereunder in detail.

Civil engineering

Foundation drawings for the civil works were sent
in December 1981. The foundation works were ready
on July 20, 1982.

During the installation of the equipment it became
clear that some pits were having water leakages
caused by insufficient compaction of the concrete.
The watertight making was complete in February 1983.
Gemco Engineers has brought to the attention of
the project that the concrete is of low quality and
care should be taken for cracking and/or damages
during operation of the equipment.

Plant engineering, manufacturing & testing

The engineering and manufacturing of all equipment took place from December 1981 till March 1982.

Testing of the equipment has been done without the presence of UNIDO representatives.

Shipment and documentation

The total consignment consisted of :

- 10 containers varying in weight from 9000 till 13100 kgs.
- 19 bundles steelstructure

The total weight of the shipment was ca. 160 tons
The transport from Holland to the project site has been carried out by the following :

- Rotterdam-Calcutta Vessel MS Stenko
departure Rotterdam June 20, 1982
arrival Calcutta August 10, 1982
- Calcutta-Kathmandu Doars Truck Company Ltd.
departure of first truck from Calcutta August 26, 1982
arrival of last truck at project site September 22, 1982

All documents necessary for clearing at Calcutta and Nepal border were processed by Gemco Engineers.
Import licenses were prepared by the UNDP project coordinator

Errrection and installation supervising team

The following persons have been coördinating and supervising the erection and installation of the project :

| | | |
|-------------------|------------------------|-------------------------|
| - Mr. P. Withagen | Team leader | 06.10.1982 - 20.12.1982 |
| | | 11.01.1983 - 04.03.1983 |
| - Mr. H. Elberse | Senior Supervisor | 02.09.1982 - 25.09.1982 |
| | | 06.10.1982 - 25.10.1982 |
| | | 03.11.1982 - 11.12.1982 |
| - Mr. L. Martens | Senior Engineer | 11.01.1983 - 23.02.1983 |
| - Mr. D. Kitley | Commissioning Engineer | 19.02.1983 - 25.02.1983 |

Plant erection and installation personel

Use is made of local mechanics and electricians to assemble, erect and install the total plant.

Due to local festivals, these workers were not available for approx. 3 weeks.

A general workers' strike started on January 27, 1983 and since that date no further use is made of these workers.

From February 13 onwards the foundry operators were on the project site to make themselves familiar with the equipment.

Also some assistance was given by them to complete the installation

Auxiliary supplies and connections

- For the handling of heavy equipment use is made of a local available mobile crane
- The connection to the electric mains supply was made on February 11, 1983 which was 3.5 months too late
- preliminary connection to the water mains was made on February 7, 1983.

Care must be taken for the quality of the water which is insufficient for make up water of the induction furnace water cooling system

- other materials such as fuel, foundry consumables and raw materials were available in sufficient quantities for the erection and commissioning.
- when commercial production starts an amount of certain consumables has to be imported.

Performance tests and commissioning

- General equipment testing
Prior to the demonstration and performance tests all installed equipment and machinery was dry tested in order to verify correct and specified functions.
- Melting section
On February 23, 1983 the furnace crucible was sintered. followed by a first succesful melt on the same day

- the ladle preheating system was tested and the preheated ladles were succesfully applicated for pouring the molten metal.

- sand preparation plant and moulding section.
The complete return sand system as well as the sand preparation system were succesfully tested and approved between 21 and 25 february 1983.
The moulding machines were tested february 28 and march 1 and could be accepted without any objections.

- core making section.
This section was tested on March 3 and accepted without objections

- Finishing section
All castings produced during the testperiod were shotblasted and grinded with good results.

- miscellaneous
All other tools and equipment were accepted.
And the delivery, installation and commissioning was found to be completed.

Supply of spare parts

During testing of the plant it was found that 6 parts were damaged due to the long shipping period. These parts were sent to the project site in March by airmail.

Guarantee period

The 1 year guarantee period started on March 3, 1983

