

s.s. "CONTE ROSSO".

Alterations to Machinery.

This vessel is fitted with six double ended and two single ended cylindrical boilers and double reduction geared turbines developing about 20,500 S.H.P.


The Trieste Surveyors now write stating that it is proposed to remove one single ended cylindrical boiler and fit in its place one Loeffler high pressure boiler, which is to supply steam at 1850 lbs. per square inch to two Escher-Wyss turbines which are to be coupled through their own reduction gearing to the existing H.P. second reduction pinions. The steam exhausting from these high pressure turbines is then led into the main steam pipe range from the cylindrical boilers and therefore becomes available for the existing main turbines.

IT IS SUBMITTED the Trieste Surveyors be informed the proposal to remove one cylindrical boiler from this vessel and to fit in its place one Loeffler high pressure boiler, together with two Escher-Wyss turbines coupled to the existing reduction gearing merits approval, provided the whole of the work be carried out to the Surveyors entire satisfaction.

The following plans also merit approval:-

- Arrangement of new installation - 182.171₁
- Connection of exhaust pipes - 182.171₂
- Loeffler Boiler - 182.171₃ (for a W.P. of 130 kg.per sq.cm).
- Evaporator Drum - 182.171₄ (for a W.P. of 130 kg.per sq.cm).
- Arrangement of boiler - 182.171₅
- Arrangement of Escher-Wyss turbine - 182.171₆
- Coupling of Escher-Wyss turbine - 182.171₇
- Diagrammatic arrangement of Loeffler Boiler - 182.171_{8.}

It should be added that it is not clear from the plans whether the Escher-Wyss turbines are coupled to the

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H.P. 1st reduction pinion - as suggested by plans Nos. 182.171⁶
and 182.171⁷, or to the H.P. second reduction pinions, as
suggested by plan No. 182.171¹, and the Surveyors should be
asked to state to which of these two pinions the new turbine
gears are coupled.

With reference to the Boiler Evaporator drum,
for a W.P. of 130 kg. per sq. cm.,
it should be pointed out that the tensile strength of the material
of this shell should not be less than 31.2 tons per square inch,
and the sum of the tensile strength and elongation should not
be less than 57. It is concluded that this drum is solid
forged, but this should be confirmed, and it is recommended
that it be constructed in accordance with the specification
contained in Circular No. 1514.

Detail plans showing the following parts
should be submitted in due course:-

- ✓ Headers of Radiation superheaters.
 - ✓ Headers of Convection superheaters.
 - ✓ Headers of Economiser.
 - ✓ Method of securing tubes in headers.
 - ✗ Detail of evaporator drum end plate containing steam pipe drive.
 - ✓ Detail of manhole door in end plate of evaporator drum.
 - ✓ Details of steam pipes which are an integral part of the boiler.
 - ✓ Plan showing details of Escher-Wyss turbine and gearing.
 - ✓ Pipe arrangement showing ~~showing~~ scantlings and materials of pipes.
- The Surveyors should also state what is the

proposed heating surface of this boiler, and the proposed
arrangement regarding safety valves, water gauges and blow
down ^a salinometer cock.

Return 16 plans.
Retain 8 plans.

W.D.H.

MR
4.4.35.

The Surveyors should be asked to
advise the Surveyors at Vienna and
Winterthur regarding this matter.

S.H.D.

Dr 5/4/35



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