TORSIONMETER MODEL TS 55-02A

The STOP function is provided for shutting down the system when not in use.

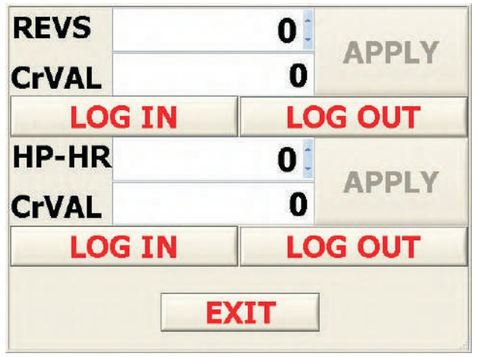

FIG : REVS PRESET FUNCTION & HP-HR PRESET FUNCTION

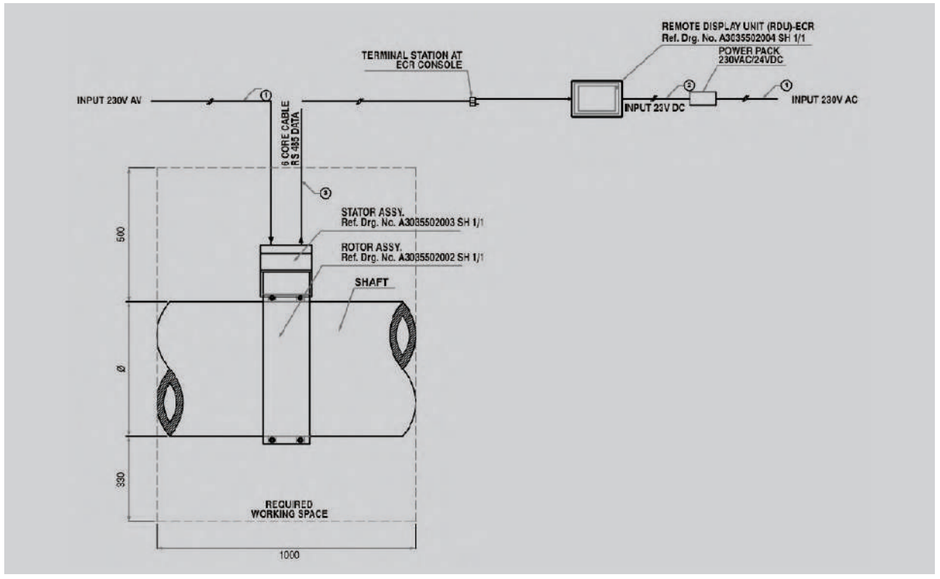

FIG : General Arrangment

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Source of Positive Change

TORSIONMETER
MODEL TS 55-02A

Source of Positive Change

Source of Positive Change

TORSIONMETER

MODEL **TS 55-02A**

Technology at work...

MEANS Torsionmeter **Model TS 55-02A is a Strain-Gauge base Torque, Speed & Shaft Horse power measurement system,** helps operator continuously monitor above parameters accurately.

Designed with latest state of the art technology with **Touch-screen** display, enables the operator to promptly monitor the **residual torque, online zero setting,** the only equipment in the market, which provides this special feature.

Since, it monitors the **power output** to the propeller shaft accurately, which is the major customer for the engine power, there by help in ascertaining the **voyage efficiency-Ship's Prediction of Hull foul & Propeller depositions.**

Our studies shows that at prevailing fuel price i.e. @ **$1000 per tonne, every day operation** loss on account of loss in efficiency can lead to right from **$ 10000 per day** for smaller vessels to **$ 50,000 per day** for large vessels.

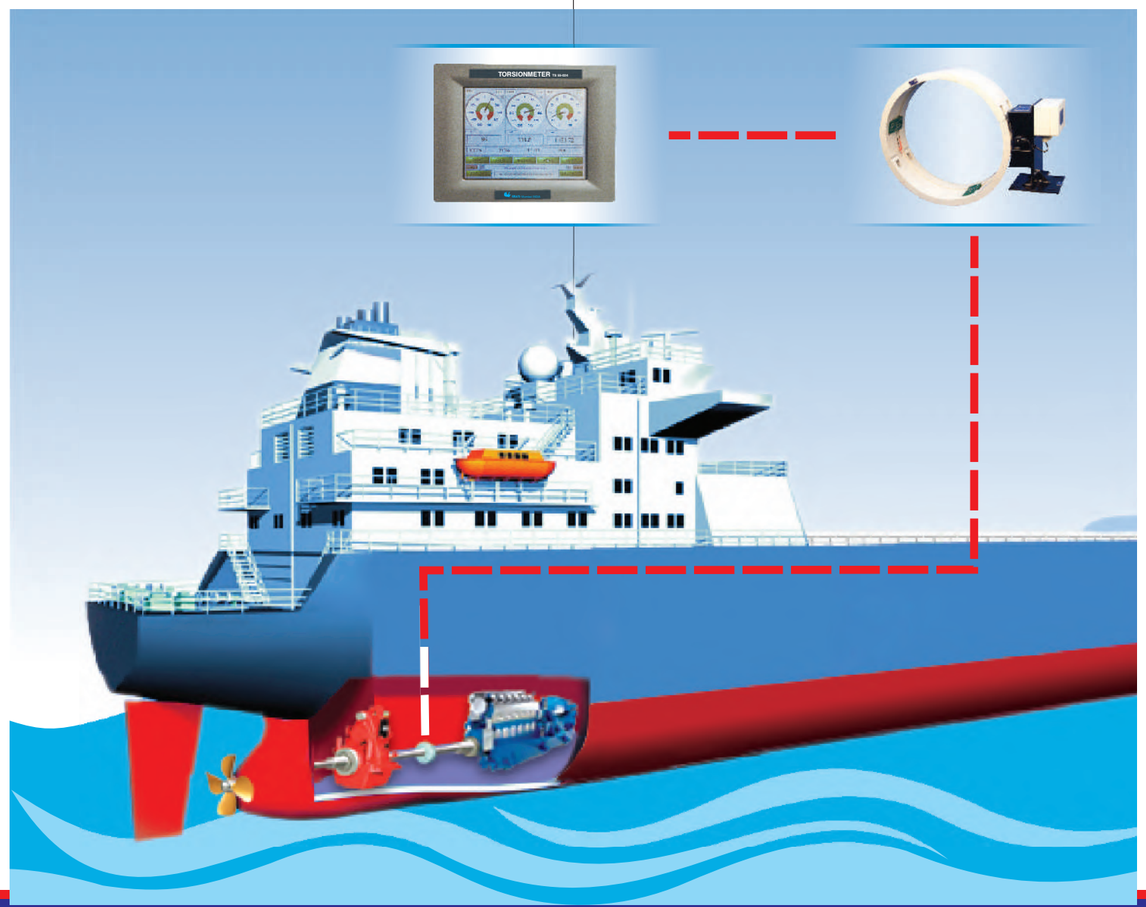
MEANS Torsionmeter **Model TS 55-02A** is a third Generation of torque measuring device which measures and displays mechanical torque experienced by the propeller shaft under dynamic conditions. The equipment design is optimized for ease of operation & maintenance keeping in view the general ergonomic condition prevailing onboard ship. The device employs the most popular and accurate strain gauge technology which transforms the propeller shaft into an accurate torque transducer.

The system **TS 55-02A** consists of three sub systems viz.

1. Rotor Assembly
2. Stator Assembly
3. Remote Display Unit(s) - (RDU)

The **Rotor Assembly** has power receiving coils and precision electronics required for data acquisition and transmission for torque signal. It also has auxiliary electronics for Zero and Calibration functions. The Rotor Unit is a split-type machined-out in two halves to fit on the shaft, from marine grade aluminium meeting, water tightness requirements and can be easily installed on site.

The **Stator Assembly** houses the electronics for preprocessing of torque data, speed signals calibration signals and power supply. The power and signal transfer between the Stator and the Rotor Unit is accomplished using induction and short range telemetry respectively. The RPM data and Torque data is transmitted to Remote Display Unit for further processing and displaying processed information on Remote Display Units.



The **Remote Display Unit** (RDU), is a panel mounted compact unit suitable for display of processed information on a color Touch Screen Display in graphical as well as numerical values on **RPM, Knm, HP, Energy Counter and Shaft Revolution Counter.** Additionally the RDU has host of user friendly features for setting up, Testing Calibration, Trend Analysis and Data Logging to provide the best possible Human Machine Interface (HMI). Optionally the RDU can also be equipped to provide 4-20mA output data for the selected parameter.

A typical front panel display on the touch panel is shown which can be easily configured to suit a particular installation or User requirements.
On the bottom side there are various Menu Command buttons which can be used for system verification and calibration purpose.

ZERO, BRIDGE and GAIN function can be activated to achieve **Device zero, Bridge Balance** (under vessel standstill condition) and **Gain.** These Menus are password protected. Similarly **REVS and HP-HR buttons are used for presetting the values of Shaft Revolution Counter** and **HP-HR Counter** respectively. These functions are also password protected.

FIG : ZERO FUNCTION

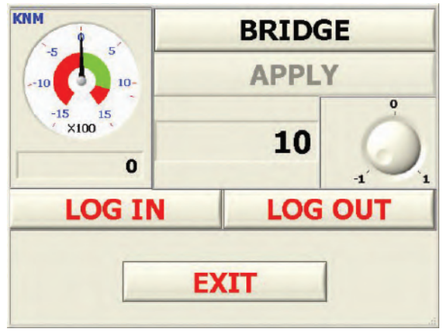


FIG : BRIDGE BALANCE FUNCTION

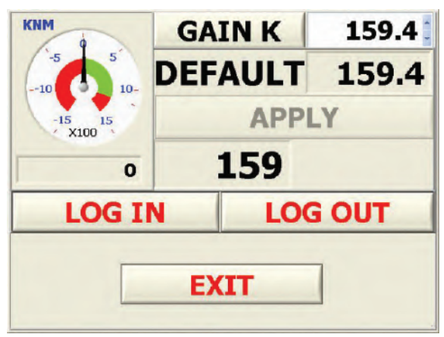


FIG : GAIN FUNCTION