

### INTRODUCTION

A Thruster Brake is a device designed to slow down moving machinery and bring it to a precise stop at the required position. The braking force is exerted on the brake shoes by a preloaded compression spring. These shoes press against the rotating drum, reducing its speed and ultimately bringing it to a halt.

#### Application:

Material Handling Cranes used in Steel Plants, Foundries, Forging Plants, Heavy Fabrication, etc.

### Brake Selection Procedure

#### Brake Torque Calculation:

For most applications the brake torque must be equal to or greater than motor full load torque as referred to the drum / wheel shaft.

$$\text{Thus, torque in Kg m} = \frac{974 \times \text{KW}}{\text{rpm}}$$

Where

KW = Motor Output  
rpm = Revolution per minute

When torque requirements known and the type and the duty cycle established, the brake is selected accordingly from the selection table. For certain special application e.g. crane hoist and their overhauling loads, the brake should be capable of providing atleast 150% of motor torque.

### TECHNICAL DATA:

|                        |                                  |
|------------------------|----------------------------------|
| Model                  | : ST 400-46                      |
| Thruster               | : ST-46                          |
| Drum Dia               | : 400 mm                         |
| Braking Torque         | : 110 Kg-m                       |
| Thrust                 | : 46 Kg                          |
| Stroke                 | : 51 mm                          |
| Recommended Oil        | : Transformer Oil - Grade BS:148 |
| Oil Capacity           | : 2.5 Ltrs.                      |
| Operating Voltage      | : 415V±10%, 3 Phase AC, 50Hz     |
| Power Consumption      | : 0.50 Amps                      |
| Input Watts            | : 180 Watts                      |
| Insulation of Thruster | : F Class                        |
| Insulation Voltage     | : 600V                           |
| Protection             | : IP 54                          |
| Shoe Liner             | : Asbestos Free                  |
| Shoe Width             | : 180 mm                         |

#### Optional:

- Manual release mechanism with lever
- Limit Switch

