

9th Southern Asia Ports, Logistics & Shipping 2014 - Conference
@
ITC Grand Chola , Chennai

28th November 2014

“ Automated & Electrical Power Control Systems for Ports and Terminals “

by

Sureskumar Sinnadurai
Managing Director – Cavotec India & Engineering Services

Cavotec is a Global Engineering Group

Head Quarter`s in Lugano,
Switzerland

Founded : 1972

Listed in NASDAQ – OMX

Revenue : € 227 Million (FY13)

Employee : 1017

Presence : 40 Countries



CENTERS OF EXCELLENCE

All Cavotec Products are **DESIGNED , DEVELOPED & MANUFACTURED** in the **EIGHT** Centers of Excellence :

Cavotec Alfo, Germany
Cavotec Connectors, Sweden
Cavotec Dabico, UK
Cavotec Fladung, Germany
Cavotec INET, USA
Cavotec Micro-Control, Norway
Cavotec MoorMaster, New Zealand
Cavotec Specimas, Italy



Cavotec India Pvt. Ltd

- Located – Pune , Maharashtra
- Started – 2005
- Employees – 30+
- Nearest Sea Port – Nhava Sheva
- Nearest Air Port – Pune
- Support – Sales, Service & Design
- Covering – India
Sri Lanka
Bangladesh
Maldives
Nepal



MARKET DIVISIONS



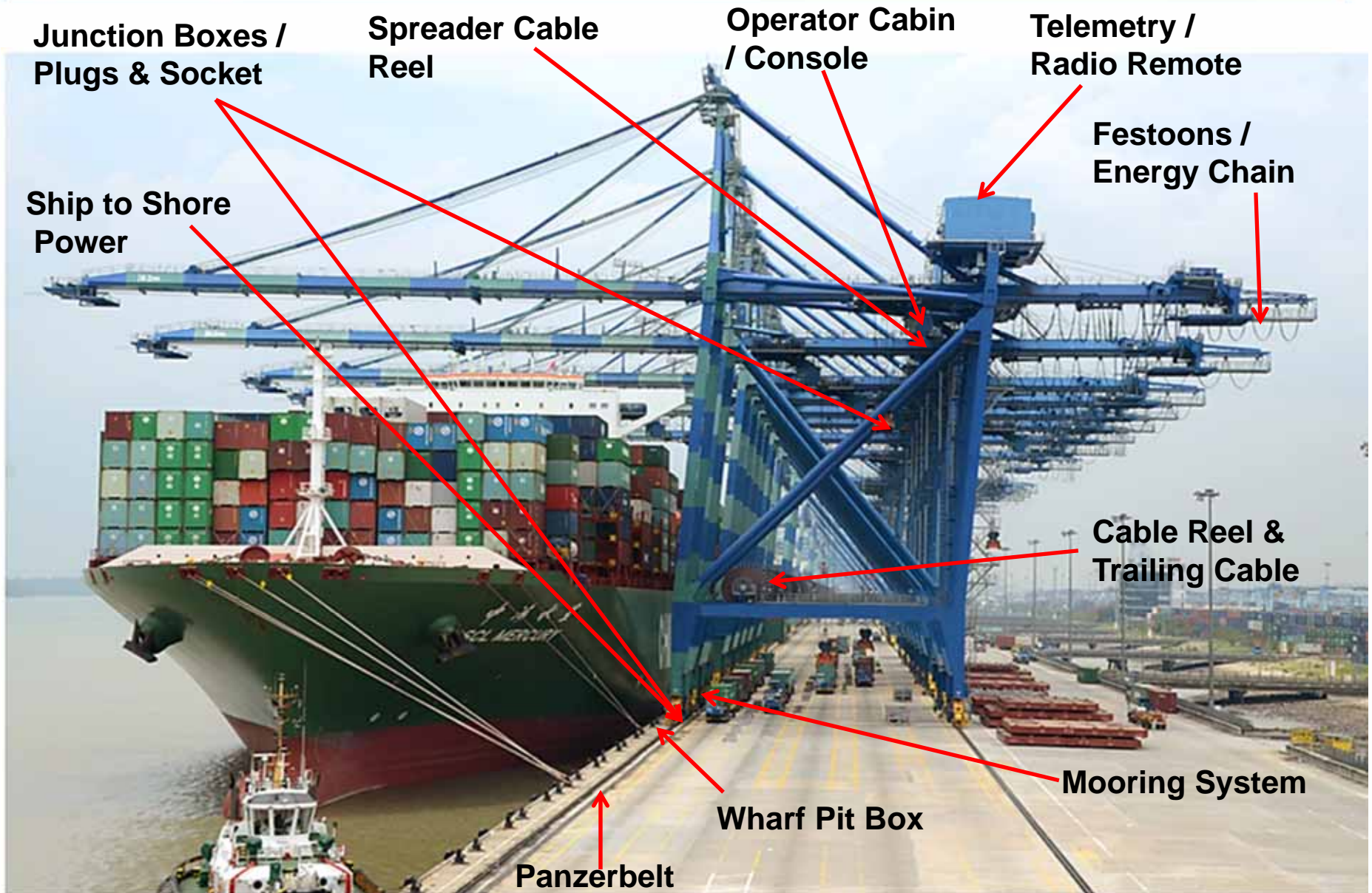
PRODUCT RANGE FOR PORTS & MARITIME

- Motorized Cable Reels (Quay / E-RTG / E-MHC)
- Trailing Cables (Power / Control / FO)
- Cable Protection / Panzerbelt
- Festooning System
- Operator Cabin & Consoles
- Telemetry System / Radio Remote Controls including ATEX
- Cable / Energy Chain – Nylon & SS including ATEX
- Automated Mooring System
- Alternative Maritime Power
- Wharf Pit Box / Ship to Shore Power
- JB / Plug & Socket including ATEX
- Spring Driven Reels
- Slipping

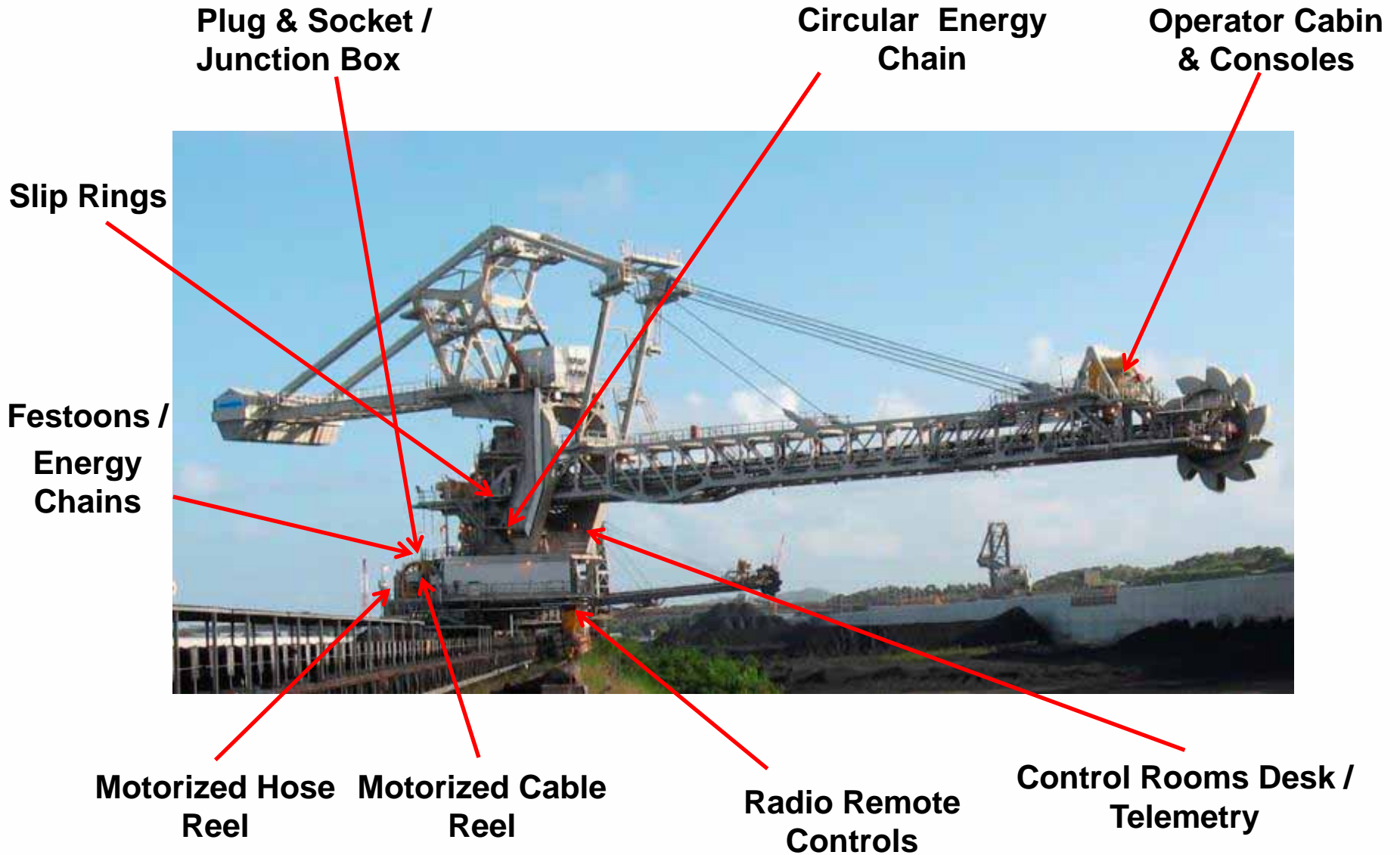


E³ BERTH

CAVOTEC SOLUTION FOR QC/SUL



CAVOTEC SOLUTION FOR STACKER-RECLAIMERS



MOTORISED CABLE REEL (QUAY / E- RTG / E-MHC)



- **Solutions for Ports & Container Terminals**
- **Application : Power Reel / Spreader Reel**
- **Cable Reels are Supplied to the following:**

- Quay Cranes
- Ship Loader / Unloader
- E – Mobile Harbor Cranes(E – MHC)
- Goliath Crane
- E – Rubber Tyre Gantry (E- RTG)
- Stacker / Reclaimer / Tripper

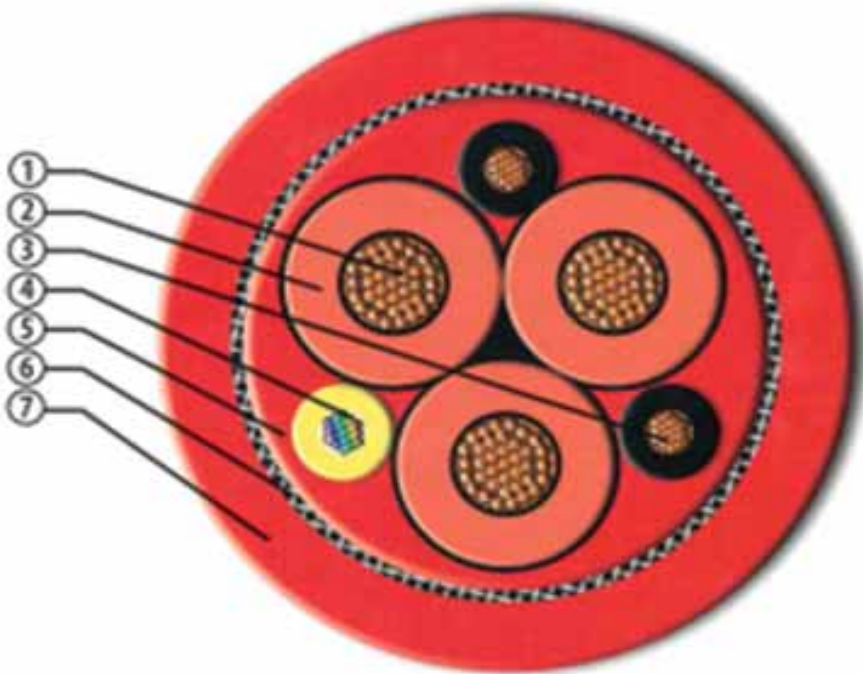
- **Manufactured in Cavotec Specimas , Italy**
- **Supplied Globally**
- **Service & Local Support**



TRAILING CABLES – POWER / CONTROL / FO



- **Manufactured by Tratos Cavi S.P.A , Italy**
- **Globally Used by Ports**
- **Used in QC, RMG , RTG, MHC, S/R, SL & SUL**
- **We Can Offer 2 Years Warranty**
- **Customized Cables**
- **Power, Control & FO**
- **Service & Local Support**



PANZERBELT



- **The Panzerbelt® is a patented system developed by Cavotec Specimas since 1976.**
- **Used for the protection of the mobile power crane cable on the wharf.**
- **More than 450 installations at work today.**
- **Withstands cross traffic without deformation.**
- **Perfect solution for the protection of electrical cables in applications with intense traffic, like ports, terminals, shipyards and steel mills.**

FESTOONING SYSTEM



- **Cable Carriers For I-Beam**
- **Special High Speed Design**
- **Cavotec Robust and Highly Efficient Motorized Trolleys Guarantee the Fast Movements of the Festoon System and Ensure a High Productivity for Loading & Un-loading Containers**
- **Service & Local Support**

ELECTRIFICATION – MOBILE HARBOUR CRANES (E – MHC)



- **Customized Design and Supply**
- **Integration**
- **Installation**
- **Commissioning**
- **Warranty**
- **Service & Local Support**

OPERATOR CABIN & CONSOLES

- **Design , Customized and Manufactured in Italy Since 1978**
- **Product Range**
 - Cabin
 - Dynamic Control Station
 - Ergonomic Remote Control Desk
 - Traditional Control Station



TELEMETRY SYSTEM



- Digital and Analog
- Customized
- Enhanced Safety and Reliability
- Real Time Process Monitoring
- Visual and Audio Availability
- Simplex and Duplex Communication

ENERGY CHAIN / CABLE DRAG CHAIN



- **Customized Solution with Nylon / SS Chain suitable for cables / hoses**
- **Technology: Sliding Non-Sliding (SNS)**
- **Nylon Roller between the chains Improves the Life Span**
- **Self-Supporting Capacity**
- **Globally used in the QC, RTG, RMG, SUL and SR**
- **Extended Warranty**
- **Service & Local Support**

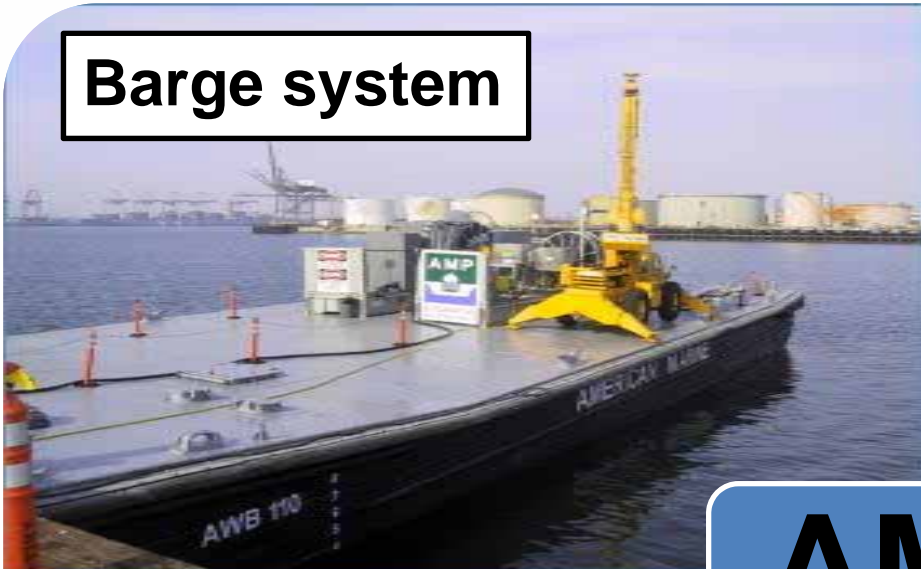
AUTOMATED MOORING SYSTEM



- **Shortening the Waiting Time**
- **Shortening the time needed by the mooring**
- **Shortening the time of the Port Stay**
- **Shortening the use of the Tug**
- **Improved Efficiency of the Container Throughput**
- **Safety of Ship & Wharf Crew**
- **Increase Volume of Ship Berth**

ALTERNATIVE MARITIME POWER

Barge system



Fully ship integrated systems



AMP

Semi fixed system



Shore based system



WHARF PIT BOX / SHIP TO SHORE CONNECTION



- **Load Rated Cover**
- **One Hand Lift**
- **Safe Access Covers**
- **Drop in Sub Assembly Construction**
- **Warranty**
- **Service and Local Support**



POWER CONNECTORS / JB



- **Manufactured in Cavotec Connectors, Sweden**
- **In-House Design**
- **Used in Spreader Cable Reel / RTG / RMG / Shore Supply**
- **Power Connector up to 25 KV**
- **Electrical & Mechanical Interlocking**
- **Global Supply Reference**
- **Atex Certified JB / Plug & Socket**
- **Service & Local Support**

SPRING DRIVEN REEL



- **Manufactured by Cavotec-Alfo, Germany**
- **Cavotec's innovative industrial electric cable reels meet the vast majority of industry requirements.**
- **Compact Design**
- **Available in several configurations.**
- **Service & Local Support**

REEFER SOCKETS



- **Manufactured by Cavotec- Connectors, Swedan**
- **Housing in Bronze**
- **Mechanical Interlocking**
- **IP67**
- **32 A + MCCB with RCD protection**



REFERENCES IN INDIA

- **ADANI**
- **JSW**
- **DPW**
- **PSA**
- **TATA STEEL**
- **POSCO**
- **JSPL**
- **GANGAVARAM PORT**
- **KRISHNAPATNAM PORT**
- **MCNALLY BHARAT ENGINEERING**
- **APMT**
- **L & T KATTUPALLI PORT**
- **GOA SHIPYARD**
- **JNPT**
- **NMPT**
- **ALBA – ASIA**
- **THYSSENKRUPP**
- **TENOVA TAKRAF**
- **SANDVIK**
- **FLSMIDTH**
- **ESSAR**
- **VCTPL**
- **GAIL**
- **DURO FELGURA**
- **SAGT, SRILANKA**
- **CICT, SRILANKA**

THANK YOU FOR YOUR ATTENTION!

