MacGregor
gravity systems

Marine Selfunloaders
Coal Barges
General
From 1992 to 1993, eight sets of MacGregor self-unloading conveyor systems were delivered to Chuan Hup Agencies Pty Ltd, in Singapore.

They were destined for barges – ranging in size between 3,500 dwt and 7,000 dwt – that were specially designed by Singapore-based company Conan Wu & Associates Pte Ltd.

The self-unloading barges are in operation along the coast of East Kalimantan, Indonesia, and shuttle coal between the mines and a new transhipment terminal. Receiving facilities are designed to accommodate four barges in total. Two barges can be discharged simultaneously at a capacity of 2,000t/h each.

System description
The self-unloading barges are flattopped. The large V-shaped hopper on deck provides a gravity flow of coal, via hydraulically-operated basket gates located in the hopper bottom, to the longitudinal conveyor belt.

The entire discharge system is remotely controlled by one operator. The speed of the longitudinal conveyor can be varied to alter the discharge capacity to local conditions.

From the longitudinal conveyor, the coal is transferred to a slewing and hoisting boom for further transport to the shore receiving conveyors. Discharge can be to either the port or starboard side. The boom can be stowed during sea voyages. Electrical switchgear and control equipment, as well as hydraulic power packs, were also supplied.

### Barge dimensions
- **Dead weight**: 7,000 dwt / 3,500 dwt
- **Length**: 106m / 79.2m
- **Width**: 22.5m / 20.5m
- **Depth**: 6.6m / 5.6m
- **Draft**: 4.5m / 3.5m

### System data
- **Discharge capacity**: 2,000t/h or 2,500 m³/h
- **Power consumption at maximum discharge capacity**: approx. 190kW
- **Cargo**: Coal (also gravel, grain, iron ore)

### Boom data
- **Slewing**: 150 degrees
- **Hoisting**: max. 18 degrees

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