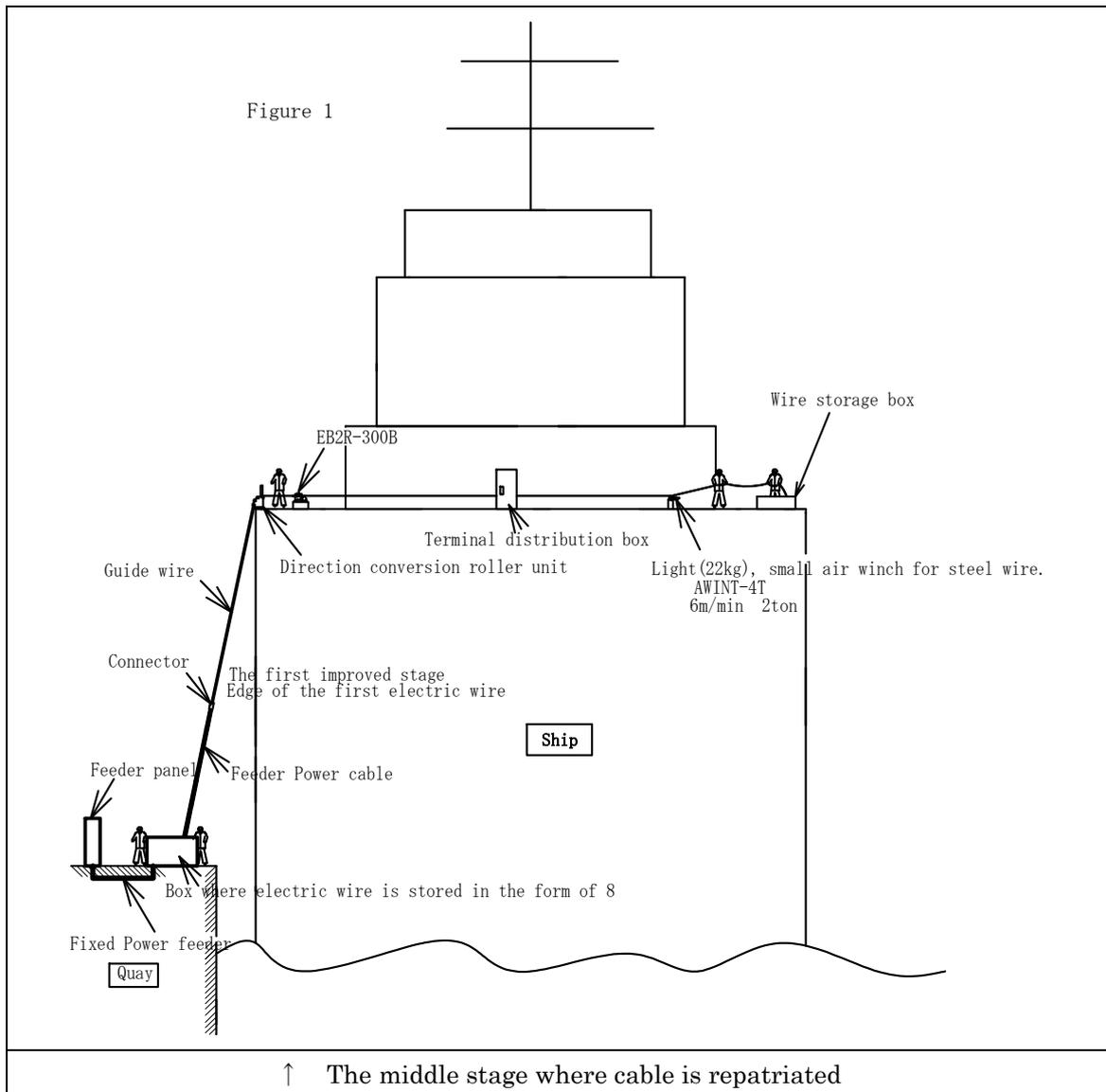


# Consideration of AMP according to cable keeping

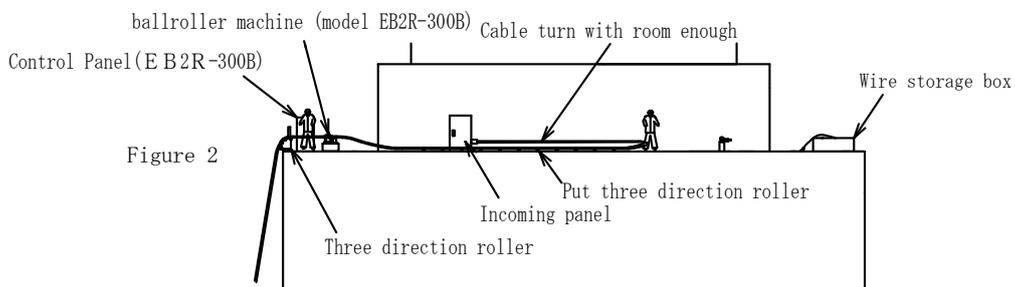
## AMP of containership

It is an international theme to supply the electric power to the ship of clean land as one measure of the global warming prevention. I think that there is the cost, and technically a problem as long as AMP of the containership in the Los Angeles port is seen though the work called standardization seems to be proceeded. Peripheral equipment is decided to AMP by technical correspondence to work to improve and to deep-fry and to unload the feeding power cable. Cost is too much like the swelling though the winch and the reel of the prior art are amateur ideas. A popular ballroller machine thinks that there is value of the examination enough when thinking about the house brand by excelling in the cost and the performance side to say nothing of standardization in the industry. The cable keeping explains first with the case with the quay. Refer to Figure 1.



The feeding power cable (6.6KV 3C  $\phi$  69mm 2pcs 40~45m) on the quay side will be repatriated by the guide wire with the air winch. Next, when the plug of  $\phi$ 200 passes on the ballroller machine, driving is switched from the winch to the ballroller machine, it pulls up to length with room, the feeding power cable is sent off, and it connects it with the panel.

The advantage: An expensive feeding power cable of each ship can be shared and need not be owned. However, the reel type in the past. The cable with connected plug of  $\phi$ 200 is rolled in AMP, it is not possible to deep-fry, and there is a fault that cannot help becoming ownership of each ship.



↑ Finished stage

When the point of the feeding power cable (connected plug of  $\phi$ 200) passes on the ballroller machine, the cable is held in the ballroller machine and it repatriates it.

When there is a vertical movement of the ship, it controls with the tension sensor and it drives automatically

The advantage:

1 There is no reel with an expensive slip ring in the shipboard. There is only a cable turned with the room of 10~15m.

There are neither an electric wire nor roller and it is assumed that it is refreshing while navigating.

2 the ballroller machine pulls the electric wire with the air spring the ball mentally by even side pressure. The life prolongment at the life can be attempted.

Consideration

1 The AMP voltage of the containership is 6600V. Therefore, 440V transformer needed. It is the unavoidable one coming from the reel type that becoming 6600V.

If it is a ballroller machine, the feeding method by 440V becomes possible.

If it is a ballroller machine even if the number of the electric wire increases from 2 to 12, it is possible to repatriate it at a time. A big difference on the cost side arises.

2 If it is 440V, the plug and the outlet are good in a general round terminal. The plug

and the outlet of the nonconventional machining in 6600v can be unnecessary, and the cost save be attempted.

3 The ballroller machine finish being light and be able to move easily because of the small size. However, because the reel type is heavy and is large, the movement is difficult.

4 What do you standardize, and the directionality is very important.

Example:

- ① The voltage is united to 440V.
- ② The joining terminal is united to general-purpose goods.
- ③ A general-purpose electric wire is adopted. Therefore, the optical cable is assumed to be another wiring.
- ④ Standardization of quay feeding power equipment
- ⑤ Keeping the cable is united to the quay side.

In addition, the cost save can be greatly done if it is assumed the average rope storage.

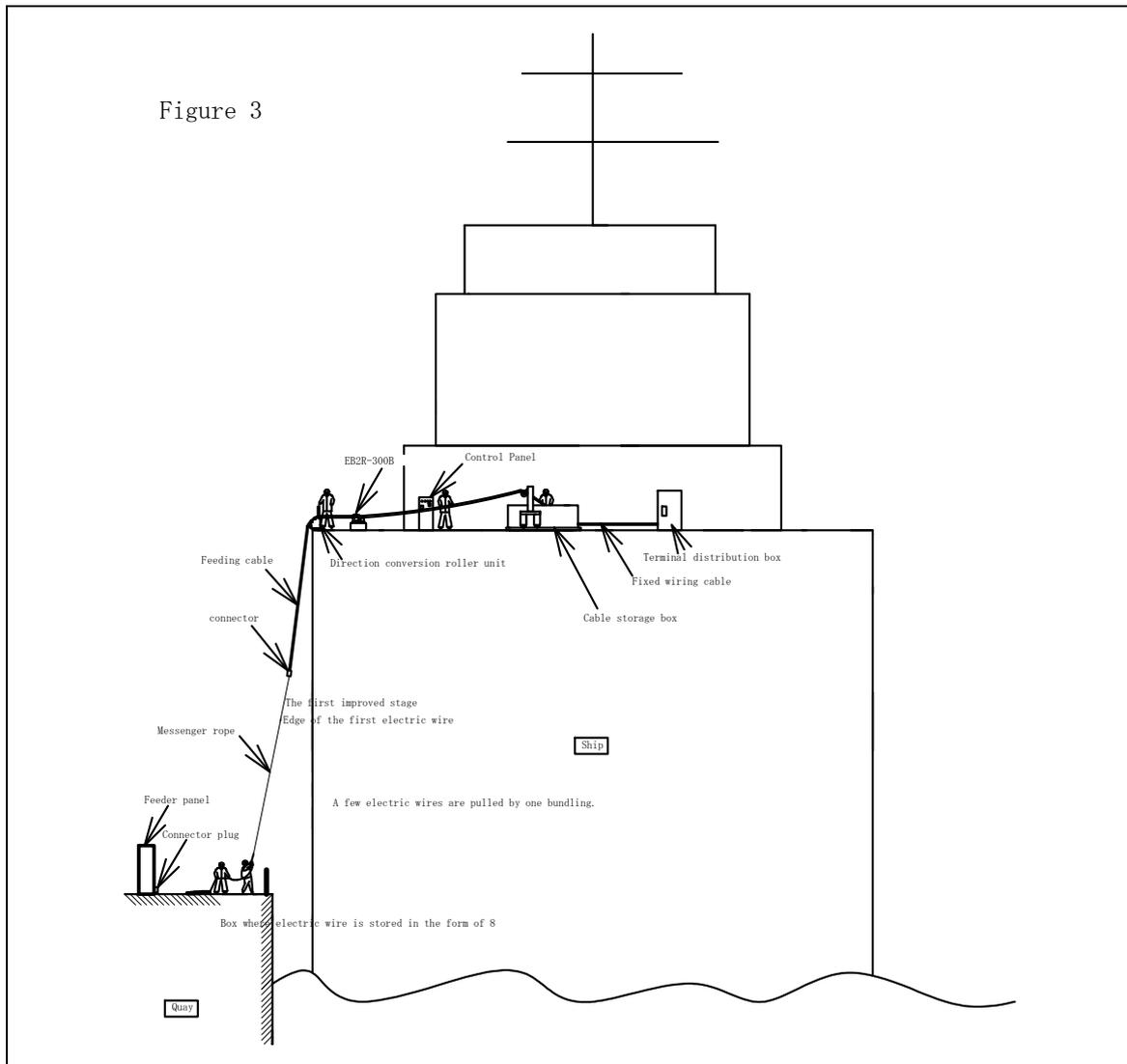
For a passenger boat, a merchant vessel, and special ships (The cable keeping is a ship) other than the containership

The power consumption capacity is multifarious in each ship, and, up to now, the ship has owned the receipt cable.

I want to think about AMP in this case while referring to Figure 3.

Condition:

Feeding power with 440V and about 6 pcs (CV) cables 200sq ( $\phi 59$ )



↑ Raising and lowering of feeding cable that ship has

- 1 It is assumed the fixed wiring between the incoming panel and the electric wire storage box.
- 2 The cable storage box is assumed the storage of the character of 8 as hoser. The messenger rope is passed to the quay side and drawing out the cable is sent off by the power of the ballroller machine.

- 3 The ups and downs movement of the ship under the receipt drives the ballroller machine with the tension sensor automatically.
- 4 It collects it with the ballroller machine at a dash.

Consideration

- 1 If it is not big and small related and unites the electric wire standard, the thickness, and the size of the terminal, the work of each port of power consumption is often standardized by the correspondence only of the number of the electric wire.
- 2 If the shipboard storage is assumed the storage of the character of 8 of an average rope, can it not take up space, and the cost save be attempted.
- 3 Traction is different according to the number of the electric wire. Therefore, it is possible to select it from among the ballroller machine that abundantly becomes complete.

What do you standardize, and the directionality is very important.

Example:

- ① The voltage is united to 440V.
- ② The joining terminal is united to general-purpose goods.
- ③ A general-purpose electric wire is adopted. Therefore, the optical cable is assumed to be another wiring.
- ④ Standardization of quay feeding power equipment

I think advancing in each company putting standardization on the mind.

If this consideration becomes the help, it is glad.