

Iron Boomerang Project . Comments from Marine Engineer[Ret] and Trainer.

Re Ocean Transport of Australian Steel Products

A revisiting of costings for the use of smaller Panamax Class vessels in preference to larger Cape Class is necessary.

The proposed Iron Boomerang class of vessels[2000TEU {containers}load] would still retain the advantage of access to shallow waterways and the ability to stern berth to basic landbacked facilities, in some cases, directly to a river bank. The ship's design to incorporate protection ,when berthing, to propellers and rudders by their location **or** the alternative of water jet propulsion, with shallower draft and fuel economies at higher speeds.The fitment of bow thrusters would also negate the need for tugs and assist in berthing when tide/current/wind is adverse.

Consideration should also be given to the use of Dual Fuel Marine Engines with the availability of L.N.G. in Northern Australia [East and West].The environment benefiting from a cleaner fuel and complying with IMO regulations banning use of fuel oil with sulphur content above 0.5% {Jan 2020}.Also helping to meet the maritime standard IMO 2025 EEDI efficiency target.

This class of vessel will have the ability to traverse narrow, shallow waterways ,tidal estuaries and river canal systems landing Australian steel products well into country's interiors.An advantage where those countries have poor transport infrastructure.

However, for international ocean cargo transport, the largest container [21,000+ TEU's] ship's numbers are increasing.The trend,in the last seven years, has seen Fifty built and more under construction.This indicates the economy of scale, vindicating the expenditure of construction and operating costs of these large vessels.Consequently the freight rate is lower.These ships do require the deeper draft ports and the multiple container cranes for the one to three day turnaround ,once berthed.

Many of the overseas ports link the growing network of the Belt and Road Initiative, facilitating Australian Steel export via containers throughout Asia,Europe and Africa.

Re Rail Transport

The return of the vessels ,to the northern ports of Australia ,with cargo goods, would require hubs for distribution to mainly southern regions.The facility of Darwin Port with it's Rail Link to the South and access to the existing East-West line ,would provide an immediate solution.

As to powering the Iron Boomerang Rail,the use of Australia's abundant nuclear deposits would be a sensible and financially viable decision to generate electrical power. The bonus with a strong ,cheap and reliable power source is the support to communities, towns, mines and business along the East West corridor and to encourage expansion and development.Further ,the electric rail would provide a pollution free motive power and negate the need for diesel power locomotives.

Also the smelting plants and steel mills would benefit from this power availability, the bonus again will be the reduced pollution and operating costs.

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