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Kurinoura Dock Yard in Japan selected the Hyde GUARDIAN system for this chemical tanker build, though picking the correct model proved tricky.



**Vessel Type:** Chemical Tanker  
**Ballast Pump Capacity:** 350 m<sup>3</sup>/hr  
**System Model:** G450GX (eventually)

## The Choice

With a ballast pump rated for 350 m<sup>3</sup>/hr flow, the Marex Sara fell into a gap in the Hyde Marine product line. Do we slightly restrict flow and provide a system rated for 300 m<sup>3</sup>/hr which provides cost savings to the owner or enable full flow through a 450 m<sup>3</sup>/hr unit? There are several factors to consider beyond just the initial equipment cost, however. The BWTS will play a major role in ballast operations which are normally conducted in port in conjunction with cargo operations. Any impact on that process impacts a vessel owner's bottom line.

## The Stakeholders

The shipyard initially wanted to utilize the less expensive HG300GX unit and placed an order for that unit. The vessel owners, when they realized that ballast operations would be extended as a result of the smaller BWTS, stepped in to force a change to the HG450GX unit. Manufacturing had already begun on the HG300GX but due to the modular design of the product, Hyde Marine was able to transition to the larger system and still meet the shipyard's delivery date.

## The Configuration

Ultimately, a successful installation of the HG450GX unit was able to take place in the shipyard. With this vessel carrying hazardous cargo, the BWTS components needed to be IECEx certified. The piping system was arranged with the UV chamber was mounted in a vertical orientation, with flow upwards through the chamber. This ensures that air cannot become entrapped in the chamber which can create a potentially dangerous situation.

