Product data
Anti collision system (advanced)

This system is recommended when two or more Siwertell unloaders are installed on the same rail, and especially when they are in use at the same time. The system takes readings from four sensors which monitor the different movements of the unloaders.

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Four sensors

The four sensors on the anti-collision system are:

- slewing position sensor: an absolute encoder sensor that will give the position from a defined zero point

- luffing position sensor: an angle sensor on the horizontal arm

- pendulum position sensor: an angle sensor on the vertical arm

- travelling position sensor: an absolute encoder sensor that will adjust the absolute encoder value to a defined value

From the designated zero point which cuts straight through the slewing centre, it is possible to calculate the value "A1". The front point can be the end point of the horizontal arm or the end point of the vertical arm. This is dependent on the angle values from the luffing and pendulum sensors. The rear point is the end point of the counterweight. The value "A1" is compared with the value "A1" for the next unloader. According to these values, and the travelling position for both unloaders, the value "B1", can be calculated. When "B1" is less than zero, the collision system will be activated. If the unloader is in a position that makes the bogie value "C1" greater than "A1", the "C1" value will be used to find out the value "B1".

Benefits

The purpose of this system is to prevent unloaders/loaders on the same rail colliding with each other or any other obstacles during operation. If the machine enters a collision area it will only be possible to move it from that area by travelling motion. It will not be possible to use the slewing, luffing or pendulum movements.
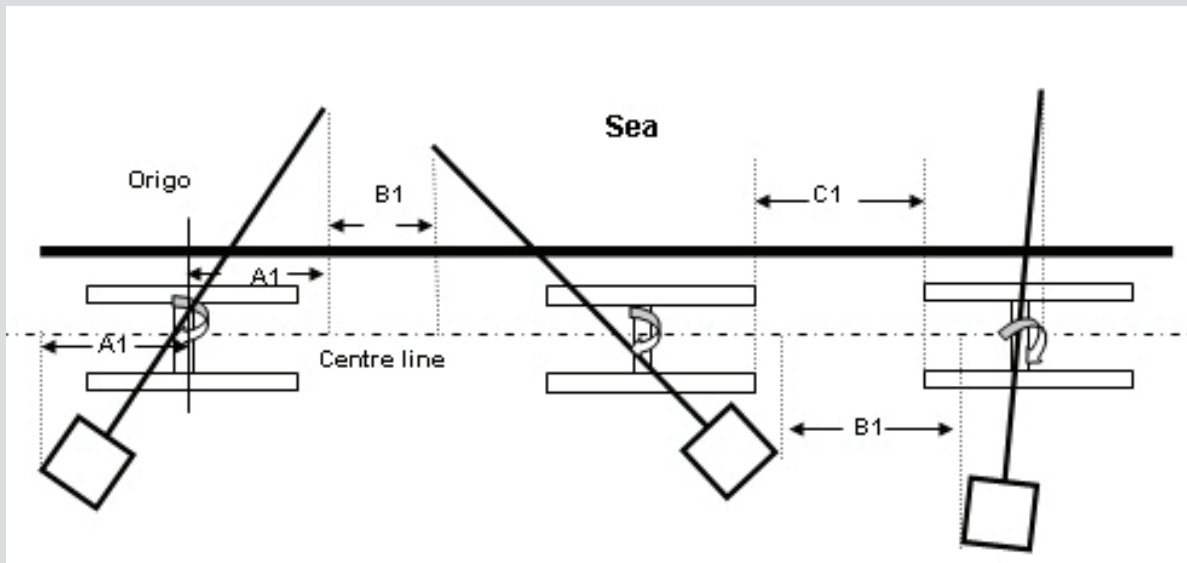
The anti-collision system is particularly beneficial if two cranes are used for unloading/loading the same vessel.

Scope of supply

The anti-collision system can be incorporated within the existing PLC-system on the cranes. Some form of communication system suitable and adapted to your location has to be installed to optimise communication between the PLC-systems of each machine.

Another system solution is to have a stand-alone system with its own PLC-systems on each unloader/loader together with a customised communication system to optimise communication between the PLC-systems of each machine.

Siwertell technicians can advise on the best solution following a discussion with you and a location inspection.

Contact

Siwertell works closely together with representatives on all continents. Please contact our head office below and we will direct you to your local Siwertell contact.

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The Siwertell product portfolio includes ship unloaders, mobile ship unloaders, ship loaders, horizontal and vertical screw conveyors as well as complete dry bulk terminal solutions. Virtually any dry bulk cargo can be handled and all Siwertell solutions are designed to ensure sustainable, efficient and safe cargo operations. Siwertell is part of Cargotec Corporation.

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