



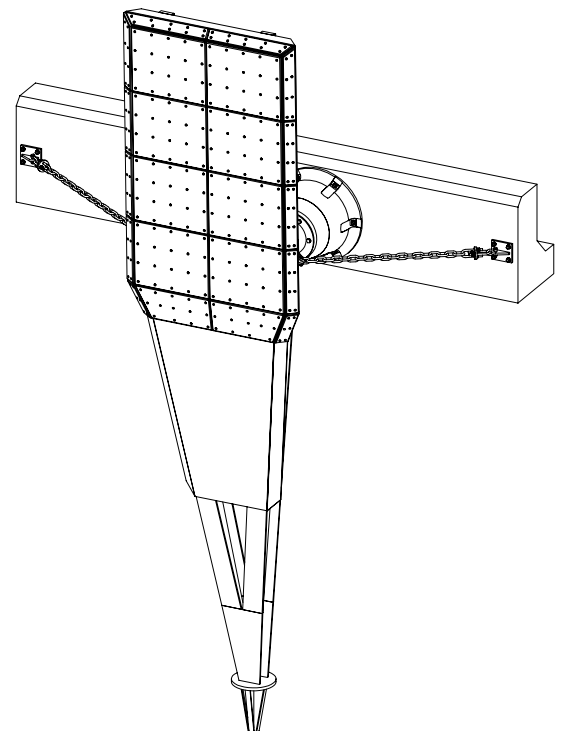
PILE FENDERS

The Pile Fender is a popular alternative for the PM Fender.

It is mainly used in order to ensure single point contact between the vessel belting and fender system at any water level. This feature is achieved by allowing the pile foot to rotate at seabed level – either by fixing it into a bucket at the seabed itself or by welding a support bracket to the backstructure.

The energy absorbing rubber unit is generally fixed close to main sea level and provides the energy at all levels with a minimum of reaction forces. The panel itself is typically inclined to follow the vessel belting and level deviations between unladen and fully laden conditions at all water levels.

The Pile Fender is widely used in Northern Europe for RoRo Ferry Terminals where sheet pile walls or pile structures with concrete capping beams are the dominating quay construction solutions.





The advantages of the system are:

- ▶ Single point contact
- ▶ Low reaction forces
- ▶ Possible savings at the backstructure because of low reaction forces
- ▶ Safe and stable system

Same as with the PM Fender, we general suggest to use SPC, CSS or FE Fenders as rubber fender unit. Pile Fender applications have to be uniquely designed for each project in order to cover all the individual vessel and berthing requirements as well as the site conditions. ShibataFenderTeam would be pleased to receive your design input allowing us to select the correct type, size and overall layout for the Pile Fender.

