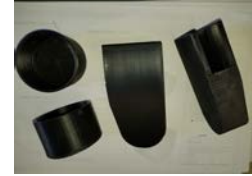
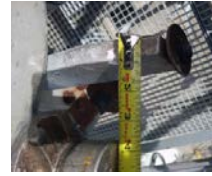


Technical Data sheet:

LNG Loading Arm Bumper and Guide Bar protector sleeves.



500 Projects™ has designed, manufactured and tested LNG Loading Arm Bumpers and Guide Bar Protectors specifically to protect the LNG Loading Arms Vessel Flange Faces from repeated damage during operations.

During the Loading and Unloading of LNG the loading arms move continuously due to various factors such as weather, tides, vessel draft variances, etc.,

When the LNG Loading arm is about to be connected to the vessel, the flexibility of the loading arms is such that precise movements are difficult to gauge, resulting in the loading arm bumpers and guide bars, meeting the flange faces (steel to steel), resulting in the vessel flange faces being damaged, requiring downtime.

Our range of Bumpers and Guide Sleeves protect the flange faces from being damaged.

The Bumper sleeves are manufactured from durable Polymer, strengthened with a fiberglass wrap to sustain minor impact and to withstand cryogenic temperatures.

The bumper sleeves do fracture upon severe contact with the vessel loading flanges, but the vessel flange faces are protected in most cases.

Our Bumper sleeves need to be fitted onto the loading arm camlocks prior to engaging the loading arm within a few feet of the vessel flange, this is to minimize impact due to sudden hydraulic control pulses. Once the loading arm flange is within 1-2" from the vessel flange face, the bumper protection sleeves need to be removed to enable the camlocks to be engaged.

The Guide Bar Protection Sleeves are also to be fitted onto the loading arm guide bars, this is to prevent the initial impact of the guide bars onto the flange faces and rendering the operations to be halted. (When using the protection sleeves, the rubber bumpers need to be removed to ensure a good fit of the guide sleeves).

Upon the completion of the LNG loading, the camlocks are to be released and the Bumper Protection Sleeves are to be re-fitted to prevent damage sustained from the Loading Arm Recoil, as this can also damage the vessel flange facing. Once the Loading Arms is approximately 2ft away from the Vessel loading flange the protection sleeves and the guides may be removed for safe keeping.

Material: ABS with Fiberglass non-combustible, high strength overlay.

Weights: Bumpers: 100g (3.6 ounces) each. Guide sleeves: 300g (11 ounces) each.

Static test load without deformation axially: 1000lbs.

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