

TECHNICAL DATA SPECIFICATION FOR TECHNOLOGY CHALLENGE 9

SAFE & DURABLE BOAT FENDER TECHNOLOGY

No	Parameters	Value
1	Additional Technical Requirements	<ul style="list-style-type: none"> The fender system should able to resist minimal energy under the following condition: <ul style="list-style-type: none"> Single member impact: 50kJ/meter (material); or 110kJ/meter with boat landing structural members (mild steel) combined The fender system shall have coefficient of friction below 0.2 for all direction of impact. For any design with fender installed in front the boat landing, the total extending length (the centreline of boat landing's tubular to outer edge of fender) shall be less than 400mm, to allow safe personnel boat transfer with swing rope. Increase of overall wave load to boat landing structure to be less than 10% with proposed fender system. Increase of overall weight of boat landing structure to be less than 10% with proposed fender system. The fendering system shall be remained intact after impact especially the connection In the event fender system damage or deteriorated, it shall not be pose hazard to offshore personnel transfer operation. This features shall be taken into design consideration. The movement fendering system shall not cause damage to boat landing coating system. The design shall allow for flexibility in term of sectional replacement in the event of damage
2	Design Life & Warranty	<ul style="list-style-type: none"> 10 years 5 years warranty covers connection, fender material and its fitting accessories
3	Cost Effective	<ul style="list-style-type: none"> Proposed fender system cost should be competitive.
4	Pilot	<ul style="list-style-type: none"> The scope of pilot deployment is to install the proposed fender system to one existing boat landing with no rub strip

Open

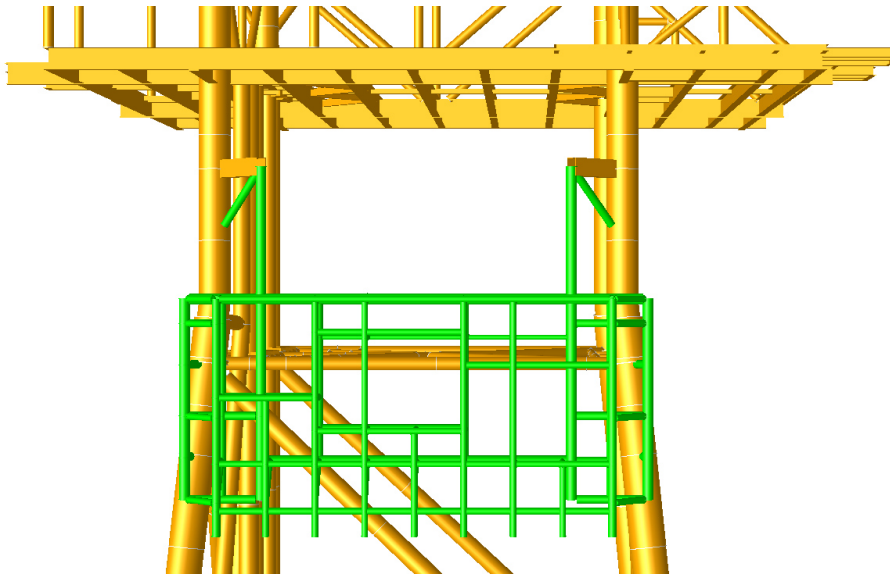
		<ul style="list-style-type: none"> • Performance monitoring for pilot installation is 1 year • For the pilot, the selected solution provider shall bear all materials, engineering, testing, manufacturing, and onshore logistic, installation supervision costs incurred for the deployment. • PETRONAS to provide offshore logistic support from demarcation point to/from offshore facility and construction resources for installation. • Pilot installation tentatively by Q4 2020.
5	Attachment 1	<ul style="list-style-type: none"> • Typical boat landing structural framing diagram with and without rub strip

PETRONAS TECHNOLOGY CHALLENGE 9: "SAFE & DURABLE BOAT FENDER TECHNOLOGY"

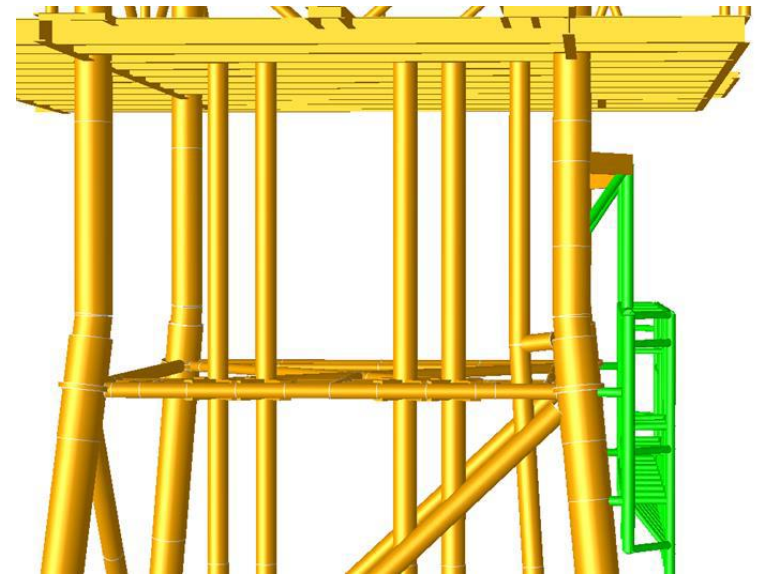
Attachment 1

PETRONAS TECHNOLOGY CHALLENGE 9

DIAGRAM #1: BOAT LANDING WITHOUT RUBSTRIPS (3D MODEL) – 1/3



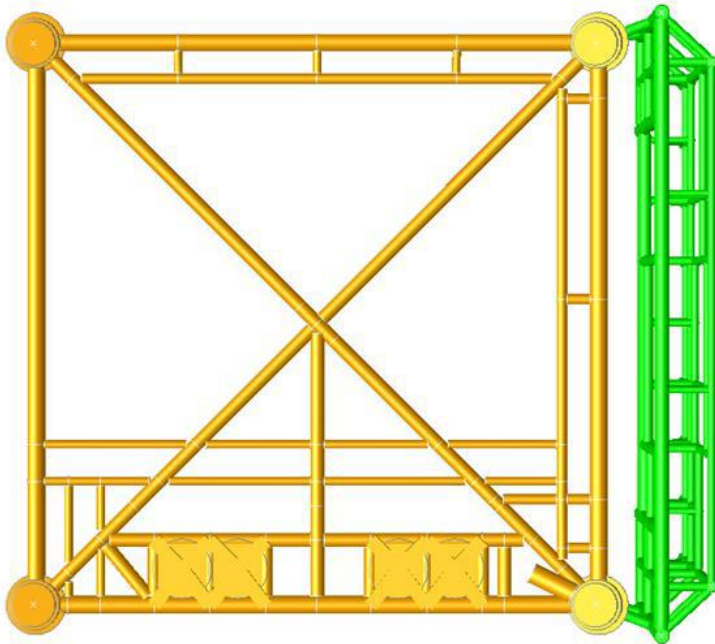
Front View



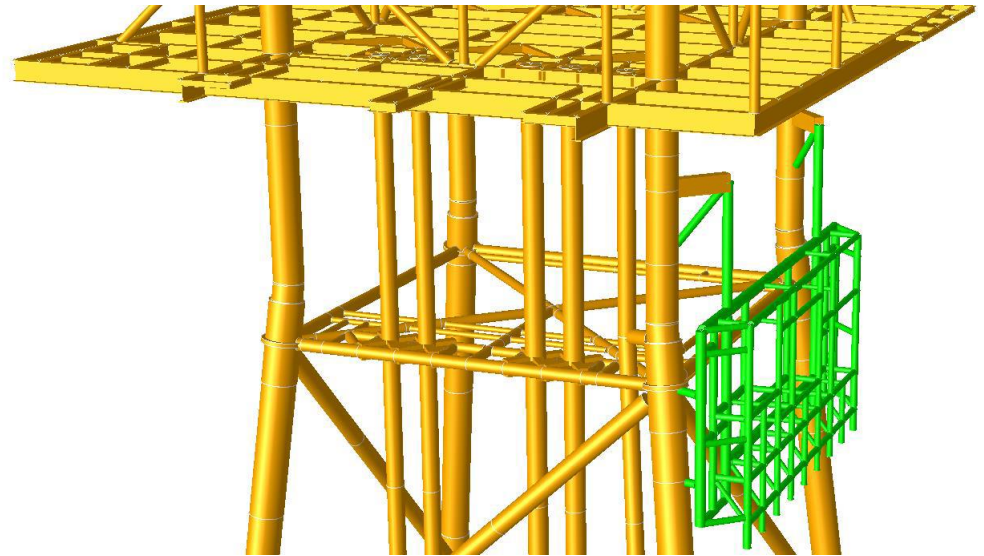
Side View

PETRONAS TECHNOLOGY CHALLENGE 9

DIAGRAM #1: BOAT LANDING WITHOUT RUBSTRIPS (3D MODEL) – 2/3



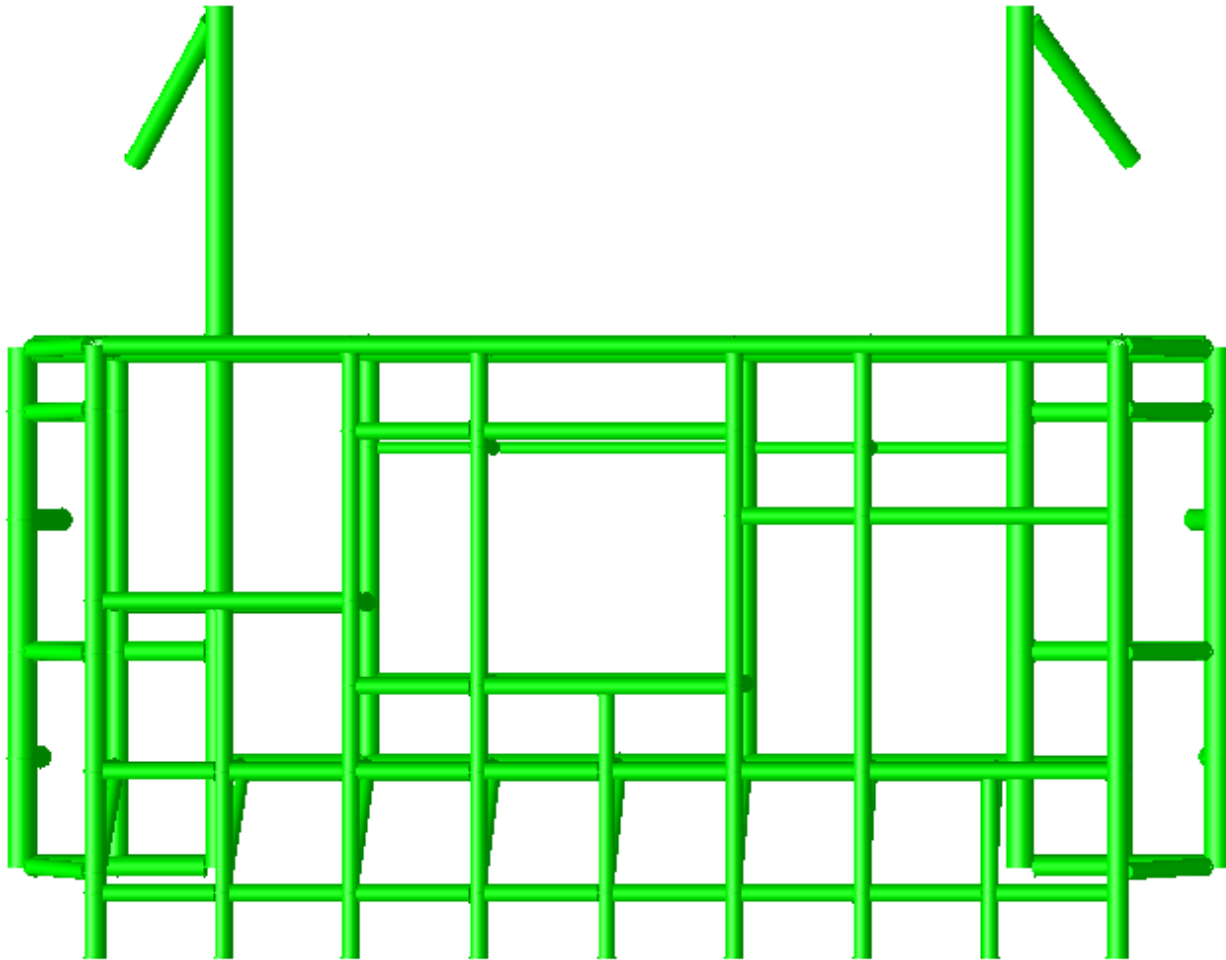
Plan View



Elevation View

PETRONAS TECHNOLOGY CHALLENGE 9

DIAGRAM #1: BOAT LANDING WITHOUT RUBSTRIPS (3D MODEL) – 3/3

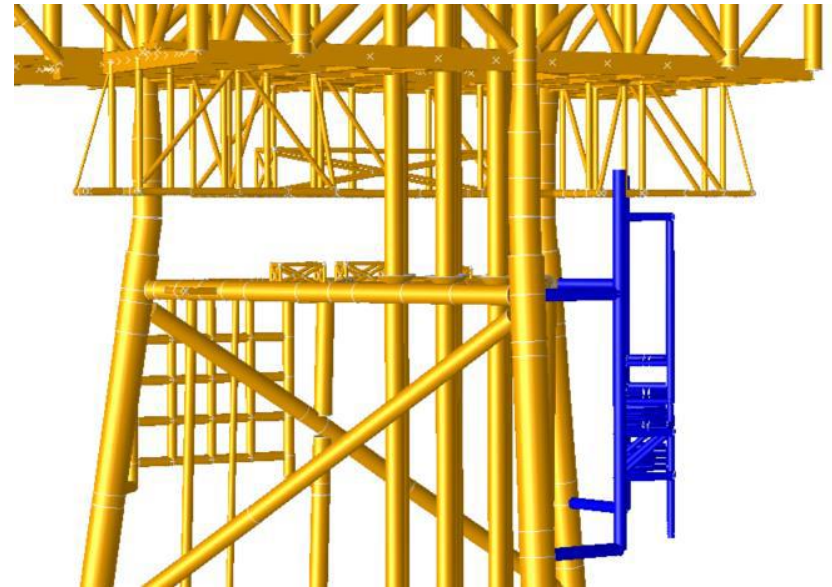


PETRONAS TECHNOLOGY CHALLENGE 9

DIAGRAM #2: BOAT LANDING WITH RUBSTRIPS (3D MODEL) – 1/3



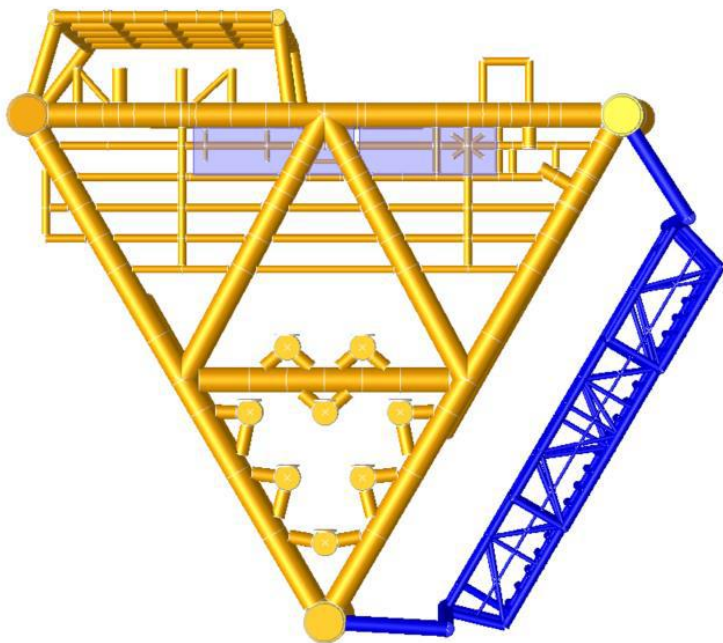
Front View



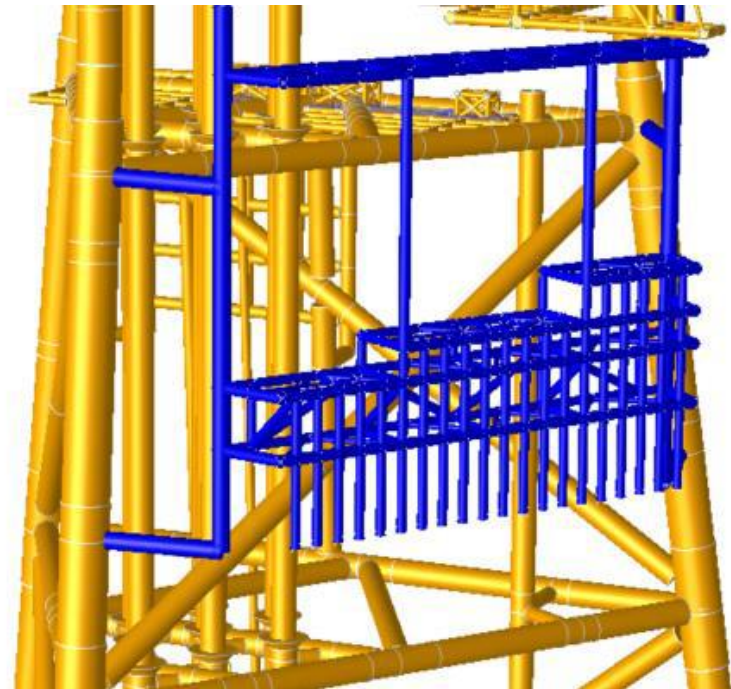
Side View

PETRONAS TECHNOLOGY CHALLENGE 9

DIAGRAM #2: BOAT LANDING WITH RUBSTRIPS (3D MODEL) – 2/3



Plan View



Elevation View

PETRONAS TECHNOLOGY CHALLENGE 9

DIAGRAM #2: BOAT LANDING WITH RUBSTRIPS (3D MODEL) – 3/3

