High Performance Active
Motion Stabilization System

Safe Motion

sonitus
engineering solutions

SONITUS Engineering, with its Office in Istanbul Technopark, one of the most important technology bases of Turkey, carries out its great work with a high sense of sensitivity.

P: +90 216 515 39 61
F: +90 216 251 19 93
E: info@sonitus.com.tr
sonitus.com.tr

Sonitus Engineering Consulting Inc., based in Istanbul Technopark, one of the most important technology bases of Turkey, conducts its activities with confidentiality and a high sense of sensitivity. Sonitus adds significant value to our country's economy with its factory equipped with modern technology in Kocaeli İMES Dilovası Organized Industrial Zone under the roof of "Aras Marine Investment Holding"

Sonitus Engineering Consulting Inc. develops high-tech products and innovative engineering solutions in many fields of the defense, maritime, and aviation industries specific to customer needs while comprehensively analyzing target market and technology trends.

Sonitus Engineering Consulting Inc., as a result of its wide range of competencies covering almost all the current technologies used in the industries it serves, is in the position of solution partner of the big players of the sector.

Safe Transfer of Personel and Loads

Active Motion Stabilization Systems are technological systems designed for ships, floating platforms and other marine vehicles that can be used in the open sea.

Ships and offshore platforms move due to natural factors such as currents and waves. These movements can make work conditions and operations at sea difficult and even dangerous. Therefore, the maritime industry is turning to various motion stabilizing systems to stabilize motion at sea and provide safer and more efficient working conditions. Sonitus's Active Motion Stabilization System ensures safe and rapid transfer of materials and people from a ship to a fixed or floating point at sea in harsh sea conditions; it is designed to minimize the wave effects of ships and other marine vehicles and to prevent unwanted movements from being transferred to the gangway. This system we developed is used to make maritime operations safer and more comfortable by balancing movements caused by waves, currents and other natural factors. Sonitus's Active Motion Stabilization System enables the detection of sea motions and the production of damping movements in three axes to reverse the experienced accelerations. In this way, the end of the gangway remains fixed at the desired point an safe transfer of cargo or personnel is achieved.

CUSTOMIZED DESIGN

Customized Design

Sonitus's Active Motion Stabilization System is equipped with a technology that eliminates the risk of displacement of the end of the gangway. The design can be customized according to customer needs.

The best solution is achieved by optimizing factors such as the desired distance to be reached with the gangway, the weight of the transferred load, and the desired sea conditions to work in. The gangway can be placed at any height on the ship and can be used integrated with another structure in accordance with the use of the deck.

Sonitus's Active Motion Stabilization System compensates for ship movements at significant wave heights of up to 3.5m by actively controlling the gangway. Sonitus's Active Motion Stabilization System can be used for many purposes. Each project may vary in terms of system location and in-ship logistics.

The gangway can be placed at any height on the ship. The system can be easily integrated into a new ship and easily mobilized into an existing ship. While the operator can use the system in the control cabin, it can also be operated via remote control if desired.

Active Motion Stabilization System

Application Area and Features

Motion Damping

Sonitus's Active Motion Stabilization System reduces the wave effects of the ship and limits the transfer of the motions such as sway, heave and roll to the gangway. This allows the ship to complete the transfer operation more stably.

Operational Safety

It increases the operational safety of transfers on ships, offshore platforms and offshore wind turbines and prevents damage to the equipment.

Precision Sensor Technology

It is equipped with high-precision IMU (Inertial Measurement Unit) and sea state sensors to continuously monitor sea conditions and react instantly.

Advanced Control Systems

Intelligent and customizable control systems allow operators to monitor system performance and adjust as necessary.

Energy Efficiency

It ensures sustainability and low operating costs by optimizing energy consumption.

Customizability

Customized solutions are designed for each project and customer.

Material and Durability

Salt water resistant coating and high strength materials are used.

Communication and Integration

The system is manufactured to be integrated into the existing communication infrastructure of ships or platforms.

Scope of Application

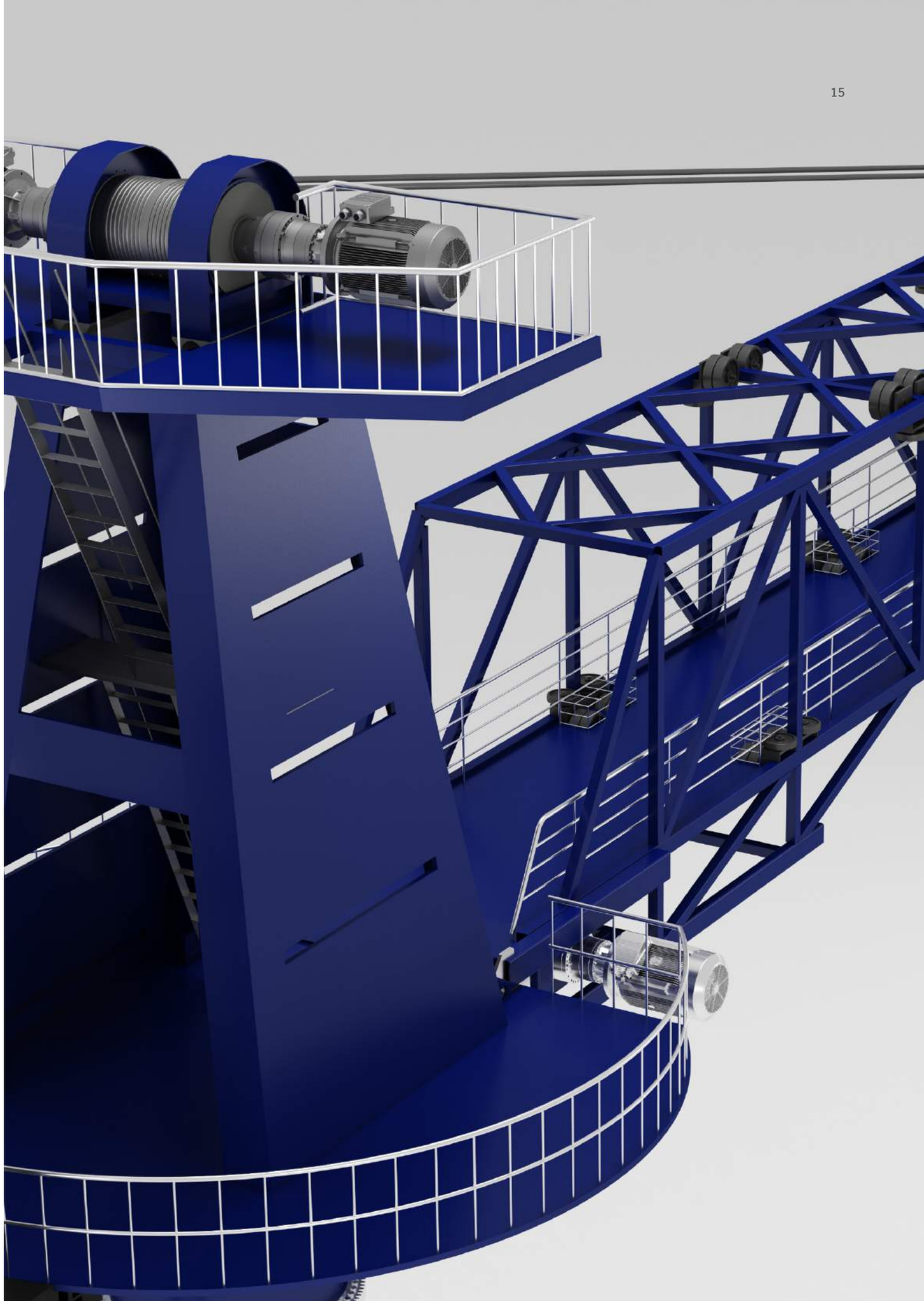
- Ships
- Floating Platforms
- Offshore Energy Production Systems
- Offshore Storage and Processing Facilities
- Offshore Petro-Chemical Facilities

High Performance Active Motion Stabilization System

Active Motion Stabilization System

Technical Specifications

TECHNICAL SPECIFICATIONS			
General	**Personnel**	300 kg	-
	Personnel + Carriage	1000 kg	-
	Crane and Cargo	-	2000 kg
	Working Radius	9 m	
	Maximum Roll	5°	5°
	Maximum Pitch	2°	2°
	Maximum Transfer Height	15 m	
	Wind speed	20 m/s	
	Hs	2.5 m	
Telescoping	**Normal Working Extension (Gangway Half Open)**	+/- 2 m	
	Emergency – No Compensation	-	-
	Working Speed	-	-
	Maximum Speed	2.5 m/s	
	Maximum Buffer Thrust Force	1000 kgf	
	Maximum Acceleration	2 m/s2	1.5 m/s2
	Required Power (kW)	0,8191	
Slewing	**Maximum Working Angle - Full Extension**	180°	
	Rotational Speed	7 °/s	
	Maximum Acceleration	2 m/s2	1.5 m/s2
	Required Power (kW)	0,2302	
Luffing	**Working Angle (Personnel + Cargo)**	+/-10°	-
	Working Angle (Personnel)	+/-15°	-
	Working Angle (Cargo)	-	+/-15°
	Emergency – No Transfer	+/-20°	
	Maximum Speed	7 °/s	5 °/s
	Maximum Acceleration	2 m/s2	1.5 m/s2
	Required Power (kW)	0	



sonitus
engineering solutions

Contact

Head Office
Sanayi Mahallesi
Teknopark Bulvarı 1/10C Blok Kat:4
Pendik/İstanbul/Türkiye

P: +90 216 515 39 61
F: +90 216 251 19 93
E: info@sonitus.com.tr
sonitus.com.tr

Factory
Çerkeşli OSB Mahallesi
İMES-5 Bulvarı No: 1
Dilovası/Kocaeli/Türkiye