



# KARACHI SHIPYARD & ENGINEERING WORKS LIMITED



## CORPORATE PROFILE





## CORE BUSINESS AREAS



SHIP BUILDING



SUBMARINE  
CONSTRUCTION



SHIP REPAIR  
WITH SL&TS



HEAVY  
GENERAL  
ENGINEERING



LABORATORY



**KARACHI SHIPYARD & ENGINEERING WORKS LIMITED**



## **KARACHI SHIPYARD & ENGINEERING WORKS LIMITED (KS&EW)**

KS&EW is a Public Limited Company (unlisted) established in mid-fifties and currently under the administrative control of Ministry of Defence Production (MoDP) Government of Pakistan. It is an autonomous body with Board of Directors, headed by Chief of Naval Staff as chairman of the board and working under Companies Act. KS&EW is certified in Integrated Management System from M/s Lloyds Register, UK; which includes ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018. In addition to above, shipbuilding projects are also certified by Classification Societies at all stages of construction as per our valuable customer(s) requirement (i.e., Chinese Classification Society, Lloyd Register, Beauru Veritas and Türk Loydu).

KS&EW is a dynamic and adaptive organization with enormous technical and professional capabilities. KS&EW is the sole shipyard of Pakistan and the largest industrial engineering setup source of the country. It has so far built over 500x ships of various designs, sizes and capacities for local and foreign customers including large ocean-going vessels, bulk carrier, tugs, tankers, frigates, fast attack crafts, fishing vessels, pilot boats, ferries etc., and has also successfully embarked upon the construction of the most modern warships, submarines and vessels for over half a century. While Ship Repair & Refurbishment division has repaired/ refurbished over 5000x vessels of different sizes and capacities for domestic and international customers.

Heavy General Engineering division has undertaken number of major marine projects including Sukkur Barrage Gates, various types of steel structural fabrications, sugar mill rollers with allied components, flood light towers, various types / capacities of cranes and lifting equipment. Recently, KS&EW has commissioned a state-of-the-art mega project of SL&TS to lift and park ships from sea to ground repair stations for quick repairs, which has enhanced the yard's repair capacity exponentially. Our range products can also be seen by visiting on our official web at: [www.karachishipyard.com.pk](http://www.karachishipyard.com.pk).





## **SHIPBUILDING**

Our Ship building team comprises of Naval Architects, Marine Engineers, Production & Design Engineers and Project Management team bearing with extensive experience in ships/ vessels construction. Our Ship building division is well equipped to build ships up to 26,000 DWT including Frigates, Fast Attack Craft Missiles, Corvettes, Fleet Tankers Logistic Support Ships, Bulk carriers, Oil Tankers, Seagoing and Harbour Tugs, Dredgers, Hopper Barges, Passenger Ferries, Fishing Trawlers and special purpose crafts. Since inception, we have built over 500x vessels of different types and sizes. There are 3x ship building berths, each is equipped with luffing cranes and allied facilities to undertake simultaneous construction of vessels, following are the berth details:

Berth	Length (m)	Width (m)	Capacity (DWT)
1	213	31	26,000
2	169	23	15,000
3	118	23	6,000

Moreover, in order to undertake constructions of; Fast Attack Crafts, Corvettes and Hangor Class Submarines for valuable customer Pakistan Navy, KS&EW has undergone extensive up-gradation in infrastructure, modernization of machineries, induction of new luffing cranes and CNC machines during 2020-22. This has enhanced the capacity of the yard enabling to compete with international ship building yards of the same capacities.

### **FASTATTACK CRAFMISSILE (INDIGENOUS)**

Length	65 m
Breadth	9.0 m
Depth	4.5 m
Draught	2.4 m
Max Speed	30 Knots
Displacement	580 Ton





## NAVAL SHIPBUILDING



### MILGEM CLASS CORVETTE

Length	108.2 m
Breadth	14.8 m
Draught	4.04 m
Max. Speed	26 Knots
Displacement	2926 <sub>Ton</sub>
Range	400 NM
Rating	142 persons

### JINNAH CLASS FRIGATE

Length	119.40 m
Beam (max.)	15.40 m
Draught	<5 m
Displacement	16,900 Ton
Speed	26 Knots
Rating	200 Persons
Naval Store Capacity	3 months



### GUN BOAT (INDIGENOUS)

Length	38.8 m
Breadth (max)	8.0 m
Depth at sides	3.9 m
Draught	8.0 m
Speed	35 Knots
Displacement	220 Ton





## NAVAL SHIPBUILDING



### FLEET TANKER (INDIGENOUS)

Length	156.20 m
Beam (max.)	21.60 m
Draught	7.0 m
Displacement	16,900 Ton
Speed	20 Knots
Endurance	10,000 NM
Complement	206
Naval Store Capacity	3 months

### F22P FRIGATE

Length	123 m
Breadth	13.20 m
Depth	10.20 m
Draught (max)	5.10 m
Displacement	2980 Ton
Speed (max)	29 Knots
Range	4000 NM
Complement	183



### 1500 TON MPV

Length	95 m
Breadth	12.2 m
Draught	4.0 m
Speed (max)	26 Knots
Displacement	1500 Ton
Endurance	3500 NM



## NAVAL SHIPBUILDING

### 600 TON MPV

Length	68.5 m
Breadth	8.7 m
Depth	5.0 m
Draught	2.5 m
Speed (max)	27 Knots
Displacement	600 Tons
Endurance	2600 NM



### 48x TON BP TUG

Length	25 m
Breadth	10.5 m
Depth	4.75 m
Draught	4.20 m
Displacement	510 Ton
Speed	12 Knots

### 16x TON BP TUG

Length	21.19 m
Breadth	9.43 m
Depth at sides	4.0 m
Draught	3.90 m
Displacement	255 Ton
Speed (max)	10 Knots





## COMMERCIAL SHIP BUILDING

### FRP BOAT

Length Overall	15.75 m
Beam	4.85 m
Draught	0.85 m
Max. Speed	32 Knots
Displacement	20 Ton
Engines	2 x Volvo
Penta Propulsion	2 x Water Jet



### DREDGE TENDER

Length	18.91 m
Breadth	8.46 m
Crane	13.6 Ton
Bollard pull	7.8 Ton
Displacement	125 Ton





## **SUBMARINE CONSTRUCTION**

As part of Pakistan's largest defense contract, Pakistan and China are simultaneously constructing 08x Hangor Class Submarines, 04x in China and 04x in Pakistan.

KS&EW being the only shipyard in Pakistan has undertaken the responsibility of building these submarines in its vicinity on ToT basis. Its modernized, state-of-the-art facility along-with Ship Lift and Transfer System (SLTS), offers the complete solution for the construction and assuring AIP (Air Independent Propulsion) equipped variants of Chinese Submarine.

Likewise, KS&EW has upgraded 60x workshops, SLTS commissioning and successful completion of HR trainings at China to fully compel the compliance with full zeal and zest. This commitment proves that KS&EW is playing a vital role in ship building sector, meeting global quality standard compliances and establishing potential partnerships and joint ventures.

### **HANGOR CLASS SUBMARINE**

Length	76 m
Breadth	8.4 m
Draught	6.2 m
Max. Speed	20 Knots
Displacement	2800 Ton



### **AGOSTA 90B SUBMARINE**

Length	76.24 m
External Dia	6.80 m
Displacement	1730 Ton
Max. Speed	20 Knots
Endurance	68 days





## SHIP REPAIR & REFURBISHMENT

Ship Repairs & Refurbishment facility has a comprehensive setup for repairing, rebuilding and overhauling of naval and commercial vessels with high quality standards. Integrated services are provided through highly qualified and trained workforce. Facilities include 02 x dry docks, 02x quay walls and luffing cranes / lifting equipment along-with modern tools for the execution of above and underwater repairs. We undertake steel renewal, major structural repairs, machinery overhauls and repairs for our local customers i.e., Pakistan Navy, Pakistan Maritime Security Agency, Karachi Port Trust, Port Qasim Authority and international customers including China, Turkey, Singapore, Korea and United Arab Emirates. We have already repaired over 5000x vessels by including more than 430x foreign flag carriers as well.



Following are the major infrastructure available for the under water repairs:

Facility	Dimensions (m)	Capacity (DWT)	LuffingCranes (T)
DD 1	L: 186 x W: 27 (inner wall to wall)	26,000	30 & 10
DD 2	L: 170 x W: 24 (inner wall to wall)	18,000	15 & 10

Similarly, for execution of above water repairs, 2x quay walls of total length of 665 m along-with lifting equipment and allied facilities are also available.





### SHIP LIFT & TRANSFER SYSTEM

KS&EW has successfully completed the installation, commissioning, and load testing of SL&TS at KS&EW facility at Karachi, in collaboration with the world's renowned OEM M/s Syncrolift, Norway. This state-of-the-art system can simultaneously accommodate 11 + 02 ships on dedicated stations; it can facilitate different types of vessels up-to 7300 T capacity, catering the regional requirements for above water repairs:

S No.	Parking	Length (m)	Width (m)
1	1 x Repair Station	135	34
2	1 x Repair Station	135	25
3	3 x Repair Stations	90	25
4	2 x Repair Stations	75	25
5	3 x Repair Stations	60	25
6	1 x Repair Station	55	25
7	2x Short term parking on transfer area (minor works and under hull survey)	125	25





## **GENERAL ENGINEERING**

KS&EW can rightly be called “the major heavy mechanical engineering industry of Pakistan”. Although KS&EW is mainly designed for shipbuilding projects initially, however, its role in support of industry and developmental engineering is prominent. It has a lengthy record of service to industries and during slump in the shipbuilding industry, it has further promoted diversification in general engineering activities as per the market demand and established its name due to premium quality and services.

### **Focused Business Areas:**

- Marines structural fabrications (Dams/Barrage Gates)
- Cranes/Lifting Equipment (3 T to 100 T)
- Steel structural Fabrications (Stadiums flood light and wind turbine towers)
- Machining Works (Forged steel sugar mill shafts, sugar rollers, hoisting mechanism for Dams/ Barrages)
- Foundry products and allied components (Steel billets, Cast iron, Sugar rollers and Alloys etc.)

General Engineering just after inception in 1957, has a long history and expertise of marine structural works involving Dry Docks Gates and Dams/ Barrage Gates fabrication, replacements, repair and rehabilitation. KS&EW has replaced 54x Main Gates and 10x Scour Gates in collaboration with M/s Dinger, Germany 1961 at Guddu Barrage. Also, Constructed and Commissioned 04x Bulkhead Gates for Warsak Dam; 14x Radial Gates for Teesta Barrage (former east Pakistan), 64x Gates Guddu Barrage, Bullheads with Semi-spherical and Daft Gates for Tarbella Dam, Vertical lift & Stoplogs for Hub Dam, and Radial Gates for Qadarabad Barrage.

KS&EW has recently completed EPC project of 6x River Sluice Gates Replacement at Sukkur Barrage based on now design by Consultant ACE-NDC (JV) Australia; under the overall project management by World Bank.



Fabrication of SLTS Platform



EOH Cranes (3 T to 100 T)



Flood Light & Wind Turbine Towers



## CORE BUSINESS AREAS OF GENERL ENGINEERING



Cane Crushing Rollers



Dam/Barrage Gates



Sugar Machinery



Portal Luffing Cranes



FoundryWIP



Steel Structures





## LABORATORY

Our central laboratory was established in 1960, though, initially for rendering assistance to quality control & checks on KS&EW's projects. The scope of work has now been extended to undertake variety of test services like metallurgical analysis, mechanical, physical, chemical, and welding tests required for various outside agencies / customers. These also cover the chemical composition and testing of metals, ferrous and non-ferrous, alloys, refractory, cement etc. The tests are carried out in accordance with BSS/ASTM standards and/or to any other classification / rules to meet customer's requirement.

KS&EW offers the following testing services to its valued customers:

- Mechanical / Physical test of ferrous / non-ferrous metals
- Non-Destructive Testing (NDT)
- Welders qualification tests
- Galvanizing tests
- Minerals & refractory
- Fire & Bentonite clays
- Dolomite, Lime stone & Magnesite
- Chromite
- Gypsum
- All kinds of Ores
- Silica & River sand
- Fire and other Bricks including acid resistance bricks
- Cement & SRC
- Ferro-Alloys
- Pig iron, Steel, Cast iron & Alloy steel(s)
- Brass, Bronze, kinds of Non-Ferrous metals
- Sodium silicate
- Non-ferrous ingots
- Calibration & Equipment testing
- Load testing
- Hydro-static testing





## SHIPYARD TRAINING SCHOOL (STS)

The state-of-the-art Shipyard Training School (STS) was established in 1957 as an Apprentice Training School for Marine Engg. Apprenticeship for four years. The school has provided prime facilities for technical training of officers, supervisors and workers to enhance their skills in various trades, which ultimately fulfil the requirement of KS&EW.

KS&EW is also contributing to skill development and employment opportunities. Currently, STS is undertaking various programs that includes Prime Minister's Kamyab Jawan Program, 3x years Diploma of Associate Engineer (DAE), and numerous short courses in electrical, mechanical and ship construction technologies etc. STS is also conducting technical training in collaboration with NAVTTC in the field of various technical trades. The institute has so far trained more than 25,000 young entrants in different cadres. It also runs paid/ unpaid internship programs, management trainee officers (MTOs) and supervisors training programs (MTSs), commercial courses affiliated with STEVTA and technical training programs in various trades in collaboration and sponsorship by NAVTTC. For further details please contact:

[contact@karachishipyard.com.pk](mailto:contact@karachishipyard.com.pk)

### STS AFFILIATED WITH





ISO 9001 : 2015  
 ISO 14001 : 2015  
 ISO 45001 : 2018








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