

HANKUK FIBER

NEW POWER GROUP



Jump to
Global
Top tier

HANKUK FIBER

HANKUK FIBER has independently developed glass fiber and taking the lead in commercialization of glass fiber in Korea.

Based on glass fiber and carbon fiber, HANKUK FIBER operates various business such as defense, aerospace, glass fiber pipe and rolling stock. HANKUK FIBER is challenging the hydrogen storage tank and wind power business in line with the government's Green New Deal policy. HANKUK FIBER aims to be the 'Best composite materials company' under the value of 'The customer first.'

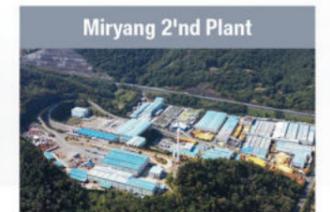
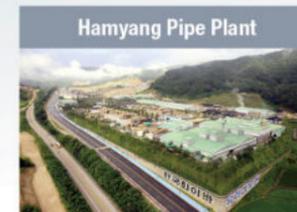
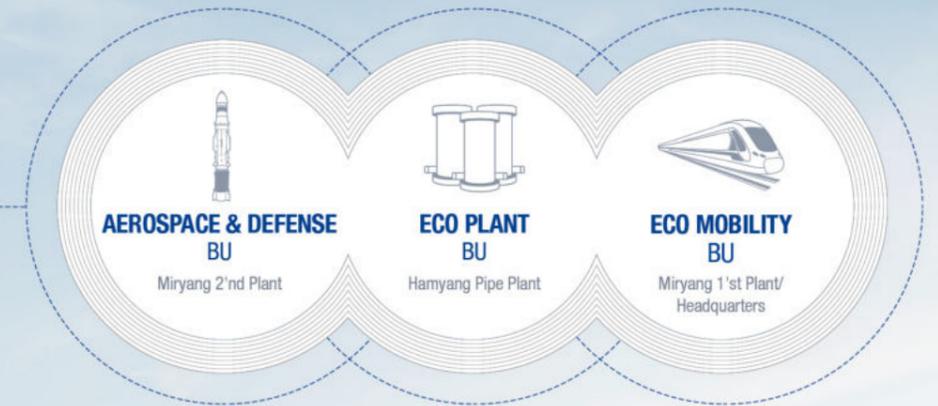
HANKUK FIBER will provide the best solution exceed the customer expectations as well as products and technologies.

Thank You.

CEO Jin-Kwang, Lee



Business Field



Company History

1970's

- 1972.04 Established HANKUK FIBER CO.,LTD.
- 1978.05 Designated as a 'Nation Defense Company'

1980's

- 1980.08 Developed a melting furnace for glass fiber production

1990's

- 1992.02 Aerospace Material (BMS 8-79) certified by BOEING
- 1999.10 Obtained ISO 9002 Certification

2000's

- 2000.03 Passed the highest fire-resistance grade of BS and NF standards for rolling stock interior materials
- 2002.10 Obtained ISO 9001:2000 certification
- 2006.05 Obtained DQMS(Defense Quality Management System) KDS 0050-9000 certification
- 2006.07 Completed construction of Hamyang Pipe Plant
- 2006.07 First accredited to New Technology certification(NET) for integrated composite rolling stock body manufacturing technology in Korea
- 2007.10 Started construction of Hamyang Regional Industrial Complex
- 2008.08 Obtained Aerospace Quality Management System AS 9100 certification

2010's

- 2010.02 Awarded by Minister of Land, Transport and Maritime Affairs for National Green Technology
- 2011.10 Korea Prime-minister Award by DTaQ (Defense Quality Management)
- 2013.02 Awarded by Minister of Science and Technology
- 2013.02 Awarded by President for Achievement of KSLV* Project (*KSLV:Korea Satellite Launch Vehicle)
- 2014.07 Established Daejeon Design Technology Center (Structure, Analysis)
- 2015.12 Signed Civil-military partnership for development of composite lattice structure technology and development of carbon composite material for high-temperature insulation heaters

- 2018.04 Performed Solid Rocket Motor Case / nozzle thermal reaction measurement and analysis task (ADD, 2018~2019)
- 2019.07 Started MLRS development project (230mm Launch Tube)
- 2019.11 Listed on the 2019 Top 10 Mechanical technology by Korea Association of Machinery Industry - Design and Manufacturing Technology of Lattice Structures with High Strength Carbon Fiber

2020's-

- 2020.12 CEO Jin-Kwang Lee inaugurated



HANKUK FIBER

AEROSPACE & DEFENSE BU

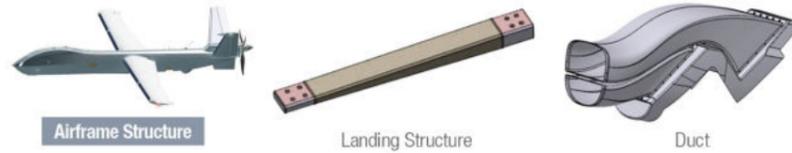
HANKUK FIBER takes a lead of defense industry's advancement and globalization on Marine, Air, Ground with best production technology of composite materials in Korea. Furthermore, HANKUK FIBER had succeeded in Nose payload fairing and Forward compartment of Korea's first space launch vehicle, 'Naro' and second space launch vehicle 'Nuri'. Through that, we are recognized worldwide for its technology with successful manufacturing.

01
Aerospace

▀ KSLV-II (Nuri)



▀ Next Corps UAV



▀ KUH

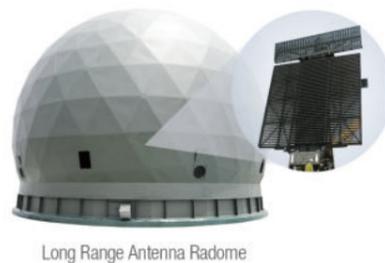


02
Radome

▀ Military Satellite Communication System II

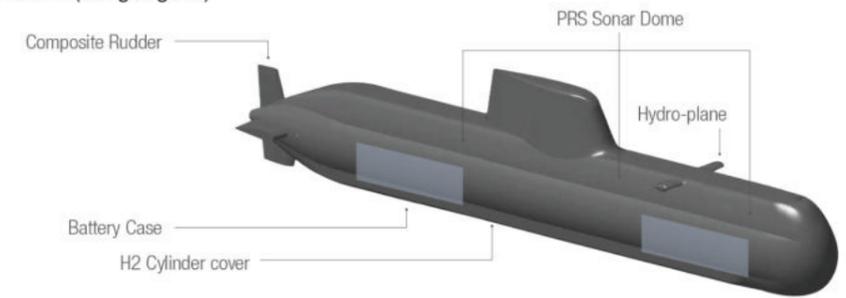


▀ Long-Range Antenna Radar / Antenna Array



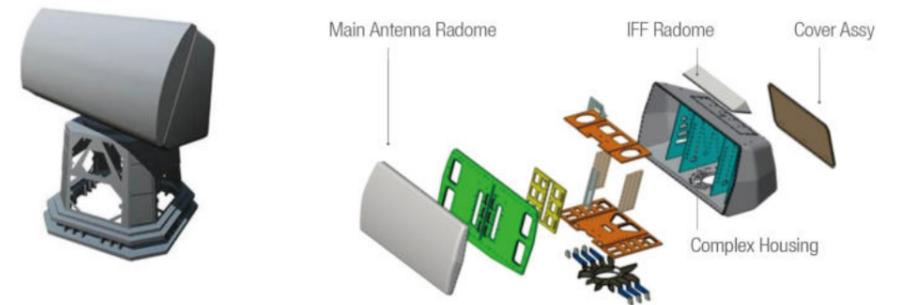
03
Navy

▀ KSS-II (Jangbogo-2)



04
Composite Housing

▀ Ulsan-1 Class Frigate-3D Surveillance Radar



▀ Raybolt (Hyeongung)



05
Guided Weapon

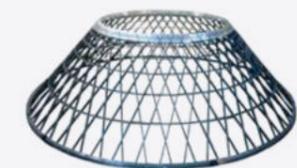
▀ Pegasus (Cheonma)



06
Core Development Task



High temperature insulation and heater composite materials
Cylindrical Needle Punching Carbon Preform



Development of Lattice Structure Technology
Cone Lattice Structure



HANKUK FIBER ECO PLANT BU

For the first time in Korea, HANKUK FIBER has produced various products such as glass fiber composite pipe for water supply and sewage, GRP Manholes, pump station manholes and piping materials for plants by using the composite material technology. HANKUK FIBER increases customer satisfaction level and is expanding into a new business area through the constant research and development.

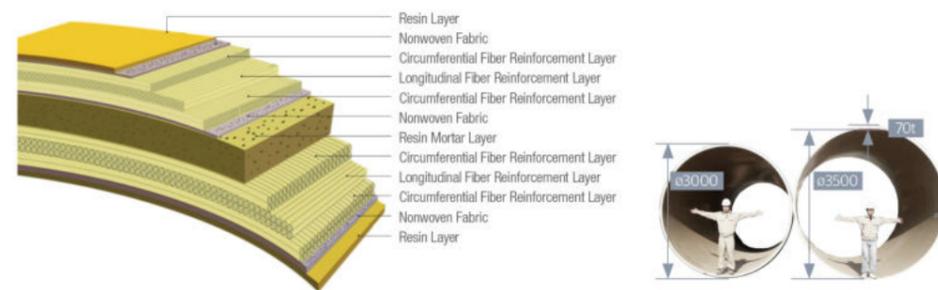
01 GRP

Glass Reinforced Plastic

Characteristics of GRP Pipe



Structure of GRP Pipe



GRP Pipe & Fitting



02 GRP Manhole

GRP Manhole



GRP Manhole Cast in Place Manhole



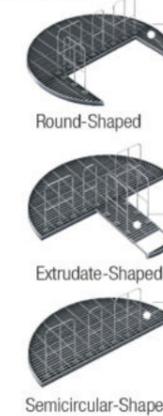
Weight	•No.1 - 960 kg (1.35m) •No.2 - 1,650 kg (1.35m)	•No.1 - 2,707 kg (1.35m) •No.2 - 3,320 kg (1.35m)
Construction Periods	1~2 Hours (Including Refill)	6~7 Days (including Curing Period)
Underwater Installation	Possible	Impossible
Compression Strength	800 kg/cm ²	180-210 kg/cm ²
Impact Resistance	High impact resistance with GRP material's elasticity	Easily broken by small crack growth created by the continuous impact.
Characteristics	Shortening the construction period and reducing cost with lightweight / Reducing maintenance cost with its superb water tightness and corrosion resistance	Despite many construction cases and widely used, long curing period causes construction delays and construction quality varies greatly depending on the worker's skill, making it difficult to maintain and manage

03 GRP Pumping Station Manhole

Upper Slab (Custom made products possible)



Grating



04 Plant-Engineering

[Customer Support Scope]



Applied to Nuclear Power Plant (Superb Quality)

Applied to Cooling Water Piping Materials

Applied to Discharge Piping (Outfall System)

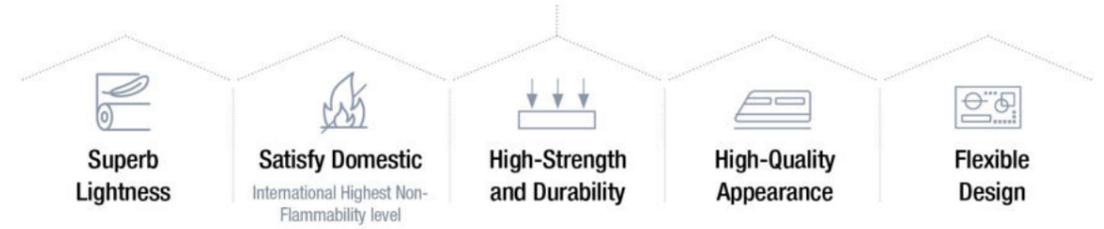
HANKUK FIBER

ECO MOBILITY BU

HANKUK FIBER uses glass fiber composite materials to provide interior and exterior products for railway vehicle which light, excellent strength and fire safety. The development of non-combustible interior and exterior FRP panels leads to the advancement of railway parts and is exported to advanced global rolling stock markets such as Europe and US through the railway vehicle manufacturer.



PRODUCT CHARACTERISTICS



Rolling Stock Parts Type

Supply to Domestic and Overseas Markets



01 Nomex Honeycomb Panel



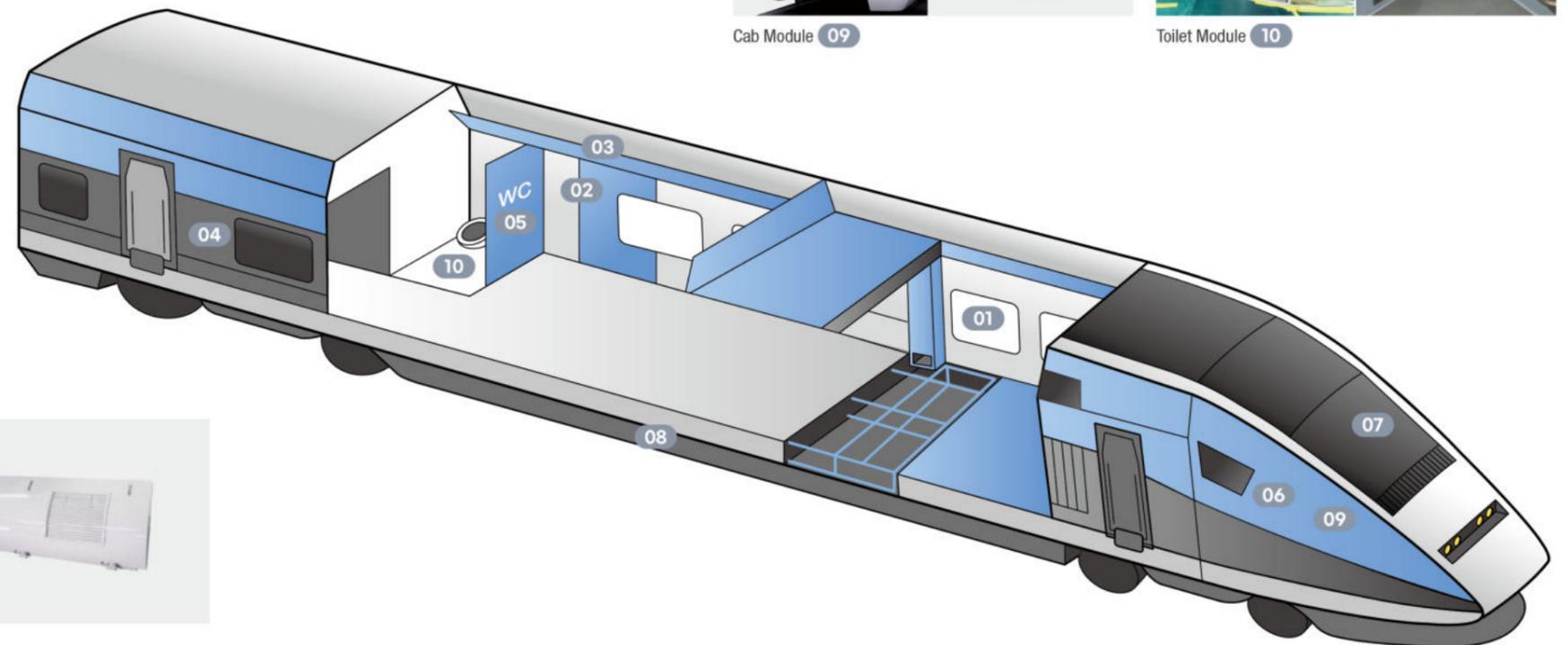
02 Cab Mask & Driver Console



03 AI. Honeycomb Panel



04 Module



HANKUK FIBER

COMPOSITE MATERIAL CORPORATE R&D CENTER

HANKUK FIBER corporate R&D center conducts a material development, basic and applied research for basic industry.

Based on these research results, We are developing product for commercialization.

High-tech Lab Equipment



UTM

Impact Tester

Thermo-Hygrostat

DSC

DMA

TGA

HPLC

GPC

FT-IR

HANKUK FIBER

NEW BUSINESS

Based on Korea's best composite- material pressure vessel technology, HANKUK FIBER pushes forward to a renewable energy business like hydrogen storage tank and transportation tank, large wind turbine blade for offshore wind power.

HANKUK FIBER is committed to sustainable corporate value increasing, social responsibility for carbon neutrality.

Design and manufacture a hydrogen storage tank for automobiles that withstand 700 bar by winding several layers of carbon fiber composite materials on a non-metallic liner.

Hydrogen Storage Tank



Major Application

Passenger Car, Truck, Minivan, Rolling Stock, UAM(Urban Air Mobility), Drone, Ship, Infrastructure, etc.

Product Certification (Under preparation)

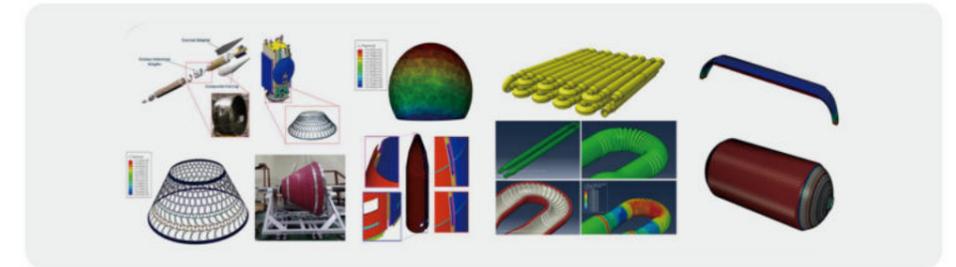
KGS(Korea), EC79(Europe), ECE R134(Overseas)

HANKUK FIBER

DESIGN TECHNOLOGY CENTER

The Design Technology Center established for research and development performs various tasks for national institutions and relevant organizations and co-working about technology for our company based on designing for composite structure and technology of thermal-structural analysis. Through this, we are putting forth a multilateral effort into Solving a problem of the defense and commercial industry and strengthening professional competence.

Major Performance Tasks



- Development of non-cylindrical hydrogen storage tank for FCEV (Fuel Cell Electric Vehicle) & EV(Electric vehicle) platform (Ministry of Trade, Industry and Energy, 2020~2025)
- Measurement and analysis for thermal reaction of composite rocket motor case and nozzle (ADD, 2018~2019)
- Development of the composite lattice structure (Institute of Civil Military Technology Cooperation, 2015~2021)
- Structure design and analysis of composite material for aerospace structure and civil structure (fuel tanks for hydrogen-electric vehicles, drones, Etc.)

HANKUK FIBER

QUALITY CERTIFICATION

Obtained patents and certificates in various fields through technology and experience.

Intellectual Property Rights



Quality System Certification



Product Certification



Direct Pipe for Water Supply and Sewage / Connector (KS, KC Sanitary Safety Standards, K Mark)

GRP Manhole, Firefighting Piping (KWWA, Performance Certification)



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