



KAGEM

Reliable Partner for the industry.

Zuverlässiger Partner für die Branche.





WHO WE ARE



- Our company Kagem was founded in 2005 in Türkiye . However, we are active in Europe, Asia, and South America. Therefore we would like to give a piece of brief information about us.
- As Kagem, we have capabilities of manufacturing (welded and CNC machining, assembling, and commission turnkey for process industries and
- industrial plants. However, we can also serve at your worldwide sites with our engineers, supervisors, and certified specialists (welders, operators, and helpers).

TEAM PROFILE



KAGEM has the most experienced experts and consultants with PhD, Masters and Bachelor degrees;

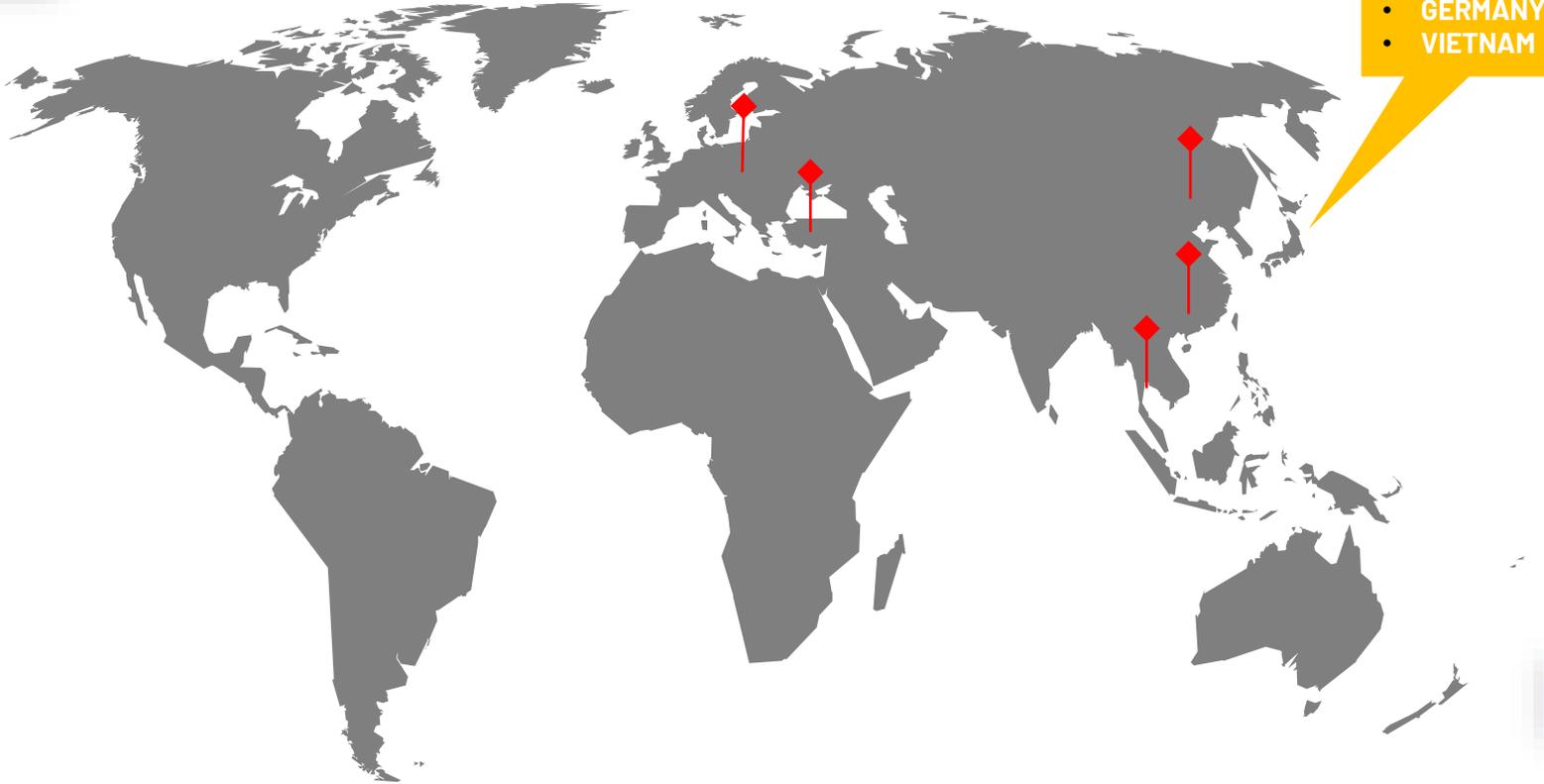
- ✓ *Mechanical engineers*
- ✓ *Environmental engineers*
- ✓ *Energy engineers*
- ✓ *Civil engineers*
- ✓ *Welding engineers (IWE& EWE)*
- ✓ *Design engineers*
- ✓ *Site Managers*
- ✓ *Site Supervisors*



CORPORATE OFFICES

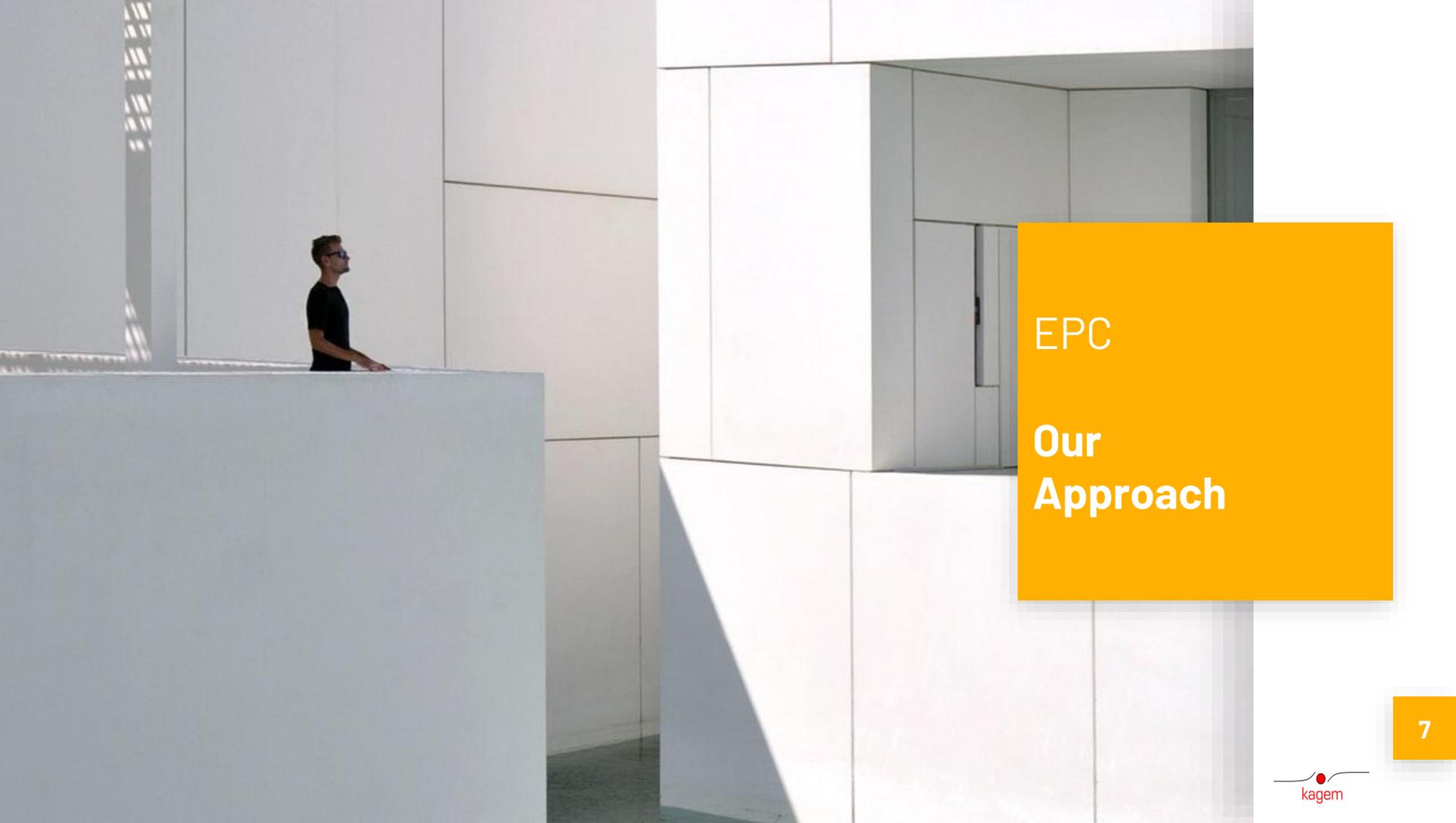
Unsere Büros:

- TÜRKİE
- CHINA
- HONG KONG
- GERMANY
- VIETNAM





Reliable EPC Partner in Industrial Market



EPC

**Our
Approach**

OUR APPROACH



- KAGEM is structured in vertical markets to increase our focus on industry needs.
- The Vertical Market Industrial offers innovative and tailor-made solutions for each market segment and customer.
- Our global team of KAGEM and corporate office experts provides the infrastructure, tools, and processes to bring your business to the next level with effective site Operation and factory works

OUR APPROACH



Turnkey, engineering, procurement, and assembly (EPC) contracting services
KAGEM Industry is committed to providing services to its customers.

- ❖ Detailed Engineering - Equipment design
- ❖ Field and Factory Manufacturing
- ❖ Material procurement and supply (Domestic-Foreign)
- ❖ Mechanical
- ❖ Electricity & Instrumentation,
- ❖ Insulation, paint, and coating
- ❖ It undertakes to undertake the whole of the required business areas including the commissioning of the system or part of the customer's preference.



Reliable EPC Partner in Industrial Market

RELIABLE PARTNER



Dedicated approach for all segments. These are our Industrial Sub-Verticals

Process piping & Pressure Eqp.

Automation & SCADA

Raw and Base Material

RELIABLE PARTNER



We have the solution for several Industrial segments.

Process Piping & Equipments

Piping & Spools

Plant & Tanks

Process Equipments

Tailor Made projects



Automation & SCADA

Components

Systems & Automation

Appliances



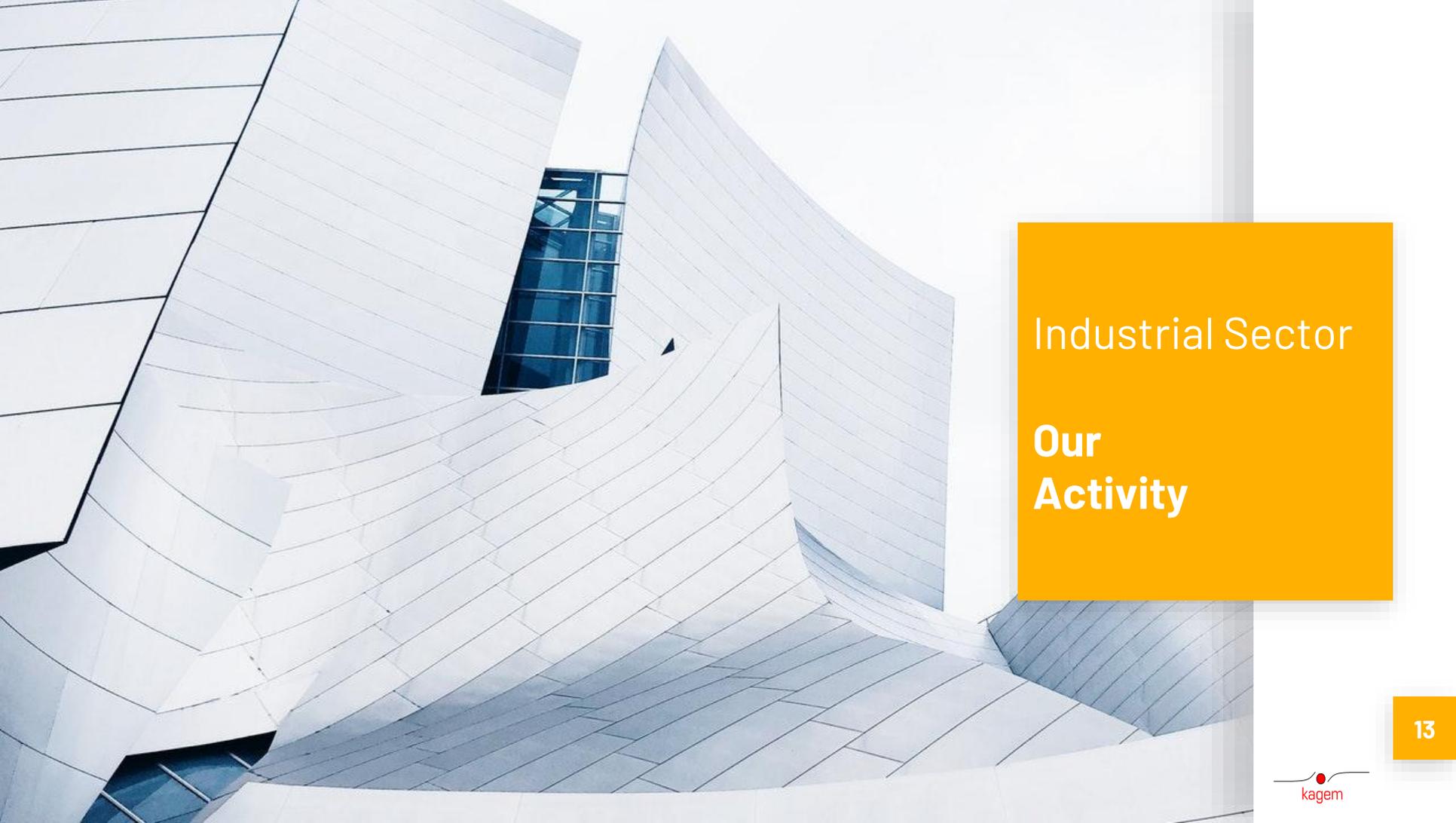
Raw and Base Material

Pipe & Fittings

Valves

Non Metals & Metals

KAGEM Industrial Solutions are special services for diverse industries and we constantly invest in knowledge, technology and markets in order to remain a leading EPC service provider in Industrial markets.



Industrial Sector

**Our
Activity**

Main Sectors

Our company's activity



ENERGY: Our company provide many services in the fields of energy ; we highly offers heat recovery system ; Fluid bed type boiler power plant and construction, assembly, maintenance, repair and management

ENVIRONMENT: Our group invest in R&D of environmental technologies. We provide turnkey engineering, procurement, construction, maintenance, repair and operation services in fields like RDF systems ; Air Treatments (VOC - Flue Gases) ; Odor Removal Systems

INDUSTRIAL SYSTEMS: These sectors are mostly dedicated construction activities and industrial purposes equipments ; storage and cryogenic tanks and piping systems and start up operations etc.

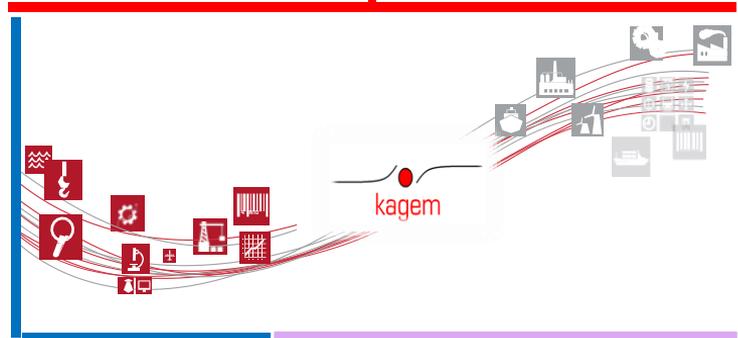
Main Sectors

Our company's activity



SUPPLY MATERIAL

PIPE
VALVE & FITTINGS
PLANTS
EQUIPMENTS



ENERGY

CFB (FLUID BED)
HYDROMECHANIC
JEOTERMAL

INDUSTRIAL

EPC or EP +C
FIRE PROTECTION SYSTEMS
AUTOMATION & INSTRUMENTATION
TECHNOLOGICAL PRODUCTS



ENVIRONMENTAL

FGD (FLUE GAS)
SLUDGE DRYING
WASTE SYSTEMS (RDF)

Our Services

Industrial Sourcing

Projects & Design

Factory Works

Site Supervision

Site Operation & Start -Up

Turn -Key Operations

KAGEM is your turn key solution partner

INDUSTRIAL FACILITIES

Wide Range of Sectors

KAGEM Industry; It serves large industrial sectors such as power plants, refineries, petrol and gas storage and process plants, mining plants, petrochemical and chemical plants, air separation plants, acid process plants, starch and glucose plants, and iron and steel plants.





Comprehensive EPC and Revision Services

KAGEM Industry; specializes in equipment, tanks, steel, piping, electrical and instrumentation installation in industrial facilities.

- Turnkey Engineering
- Build
- Equipment Supply
- Technical Purchasing
- It can provide complete contracting services by combining field installation services.



Equipment and Instrumentation Assemblies

Field assembly of process equipment; steam and gas turbines, steam boilers, heat recovery steam generators, waste heat recovery units, auxiliary boilers, compressors, turbines, generators, pumps, tanks, pressure and atmospheric containers, drums, towers, chimneys, heat exchangers, modular units, installation and erection of cooling towers, all electrical equipment and systems and similar equipment.



EQUIPMENT OR PLANT MOVING AND REVAMPING SERVICES



KAGEM provides during a relocation or place-to-place transportation Project

- Match marking of Robotics; CNC ; mechanical, electrical, and piping parts
- Decommissioning of existing machinery including removal of services and disconnection of electrical and mechanical connections and robotics & CNC
- Removal of walkways, access platforms, and other infrastructure
- Removal of Anchorage
- Dismantling of machinery including method of statement the process and marking components if re-assembly is required at a later stage



EQUIPMENT OR PLANT MOVING AND REVAMPING SERVICES

Additionally here is scope of KAGEM

- Packing machinery depending on transport requirements
- Heavy lifting to remove machinery utilising our fleet of cranes, hydraulic gantries, forklifts, versa lifts and twin lifts etc
- Removal and loading onto transportation as necessary
- Transportation to its new location both nationally and internationally including managing any road permits etc





Field Tanks and Piping

Manufacture and installation of lines in field tanks and process piping, auxiliary facilities piping, power plants piping systems, field piping.

Steel Structure Assemblies

Manufacturing of process units, pipe carrier structures, pipe and equipment supports and field assemblies.





Fire Protection Systems

KAGEM's mission is with design; national and international standards (NFPA - UL - FM) continues its field and project activities. Among the proposed services;

- Fire Protection / Engineering
- Automatic Fire Extinguishing Systems
- Fire Detection and Alarm Systems
- Air Sampling Smoke Detection System for High Precision
- Sprinkler System and Pump Station

To be done again; renewal of the existing; maintenance and Gas leakage test and inspection tests are also included.

CRYOGENIC PLANT'S AND TANKS (ASU PLANT -LIN - LOX -LAR)

Vacuum-insulated Cryogenic tanks are produced to transport storing gases in the liquid phase.

- Liquefied Nitrogen (**LIN**),
- Liquefied Oxygen (**LOX**),
- Liquefied Argon (**LAR**).

Tanks are designed to maintain temperatures of lower than - 196 °C

Cryogenic fixed tanks are designed for the storage of cryogenic liquefied gases under pressure for a long time. The inner tanks of medium high-pressure liquid gas storage tanks are made of cold-drawn austenitic stainless steel. These cryogenic tanks, which can be produced vertically and horizontally, can be used for industrial purposes





PRESSURIZED EQUIPMENTS



KAGEM INC. designs and manufactures pressurized equipment intended for storing and/or transporting gases and liquids at high pressure and high temperatures, taking into account the relevant national and international standards and regulations. As a company operating under the Pressure Equipment Directive **2014/68/EC (CE/PED)** and possessing an international type approval certificate compliant with international safety rules and regulations, we produce our products according to current safety standards.

Ultimately, these products are delivered to customers with a CE/PED certificate. In terms of production capacity and the materials we work with, we cover a wide range:

- Carbon Steel
- Stainless Steel
- High-alloy Stainless Steels (such as DUPLEX and others)
- Other high-alloy materials.

RELIABLE PARTNER



Your benefit at a Glance

- Extensive industry knowledge and market intelligence within the Industrial arena
- Production and Engineering background of best practices
- Scalable solutions across all Industrial segments and supply chain stages, tailored to your individual needs
- Innovative approaches and concepts that help you to increase productivity and/or service quality
- Integrated approach with global standards and competencies across all modes (**EN -ASME - AD MERKBLATT- CE certificate etc.**)



Production and Precise Machining for Industrial Market

MACHINING CAPABILITIES



Machining

MACHINE	YEAR	CAPACITY
CNC MILLING (DMG MOORI)	2022	8" Ø 480
CNC VERTICAL MACHINING	2022	1200 x 600 mm
NC MILLING	2022	Ø 870 x 3000 mm
CNC MOLD GANG SAW	2022	1500 x 330 mm
VERTICAL DRILLING	2022	Ø 32 mm 650 mm
AUTO BAND SAW	2022	470 x 400 mm

MACHINING PARTNER



CNC METALBREITUNG - TAIWAN -2022

- FANUC PROFESYONELLE SERIES BEIDENFIELD
- SPINDLE DREHUNG : 10000 RPM
- SPANABNAHME : X= 1100 Y=600 Z =600
- 24 SETMAGAZINE



MACHINING PARTNER



CNC DRECH MACHINE - KOREA-2022

- FANUC PROFESYONELLE SERIES BEIDENFIELD
- 8 INCH REVOLVER KOPF
- MAX REVOLVER KOPF SCHALTSTELLUNG: Ø280MM
- MAX REVOLVER KOPF LANGE : 300MM
- MAX ABMESSUNG : Ø480MM
- MAX DREHUNG : 4500 RPM



MACHINERY AND PROCESS LINES



Machine and Line Assemblies

Customer demands, in your industrial facilities;

Layout (line) changes

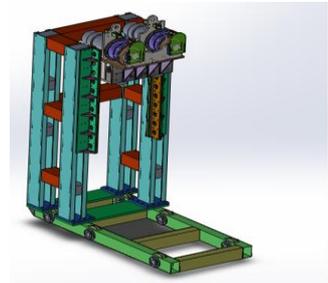
Dismantling of lines and facilities at home and abroad; project activities including numbering and packaging

robotic applications,

Maintenance and repair solutions

Process-specific automation systems

It will provide solutions to your needs.



OUR CERTIFICATES



ISO 9001 : 2015



EN 1090- 1- EXC 4

OUR CERTIFICATES



Manufacturer/production facility **KAGEM Çevre Enerji ve Endüstriyel Sistemler A.Ş.**
Ayşe Bacı mahhallesi , Bursa Balıkesir yolu sok. No: 430 6 Eylül /
BALIKESİR

Standard: EN ISO 3834-2

Scope: Steel Components and Structures, Welded Productions, Technological
Productions, Pressure and Cryogenic Tanks, Crane and Lifting Equipment

Certificate No: CR-TUVNORD-2023/0160-R00
Report No: RP-CR-TUVNORD-2023/0159-R00
Certificate start date: 15.09.2023
Certificate expiry date: 14.09.2026

The company is using a quality assurance system,technical equipment, qualified
personnel and procedures for joining processes for manufacturing and testing of
welded products.

Istanbul, 15.09.2023
See Annex 1


Şahin ZURKALCI
Technical Manager
TÜV NORD Türkiye Teknik Kontrol ve
Begelendirme A.Ş.

In case of continuous adherence to the requirements of the standard and certification agreements the certificate remains valid until the date specified above.

ISO 3834-2



Scope of certification

Welding process according to EN 4063	Base Material acc.to CEN ISO/TR 15608	Joint Type	Approval Range of Thickness
111	1.1 / 1.2	BW / FW	0.5-100mm
135	1.1 / 1.2	BW / FW	0.5-100mm
141	1.1/1.2 / 8.1	BW / FW	0.5-100 mm
121	1.1 / 1.2 / 8.1	BW	0.5-100mm

Responsible Welding Coordinator

Name Surname	Birth Place	Birth Date
Akın DEMİR	Van	01.07.1981

Deputy welding coordinator

Birth Place	Birth Place	Birth Date
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Certificate No: CR-TUVNORD-2023/0160-R00
Certificate start date: 15.09.2023
Certificate expiry date: 14.09.2026

Istanbul, 15.09.2023


Şahin ZURKALCI
Technical Manager
TÜV NORD Turkey Teknik Kontrol ve
Begelendirme A.Ş.

In case of continuous adherence to the requirements of the standard and certification agreements the certificate remains valid until the date specified above.

OUR CERTIFICATES



NFPA COMPANY MEMBER CERT.



LEGAL PERSONNAL ADEQUACY TRAINING CERT.

ENGINEERING STANDARDS

- EN
- ASME
- EPA
- ASTM
- EURO CODES



QUALITY AND PERSONNEL COMPETENCIES

The competencies of the personnel within our structure are qualified from accredited institutions in accordance with the legislation.

EN 9606 -1	WELDING STAFF CERTIFICATION
EN 15609 -1	WPS - WELDING PROCEDURES
EN 15614 -1	WPQR - APPROVED WELDING QUALIFICATIONS
MEB	VOCATIONAL QUALIFICATION DOCUMENTS
ISG	OCCUPATIONAL SAFETY EXPERT (A-B-C)
EWE	WELDING ENGINEER
NDT	INSPECTION PERSONNEL (VT- UT-MT-PT Level II)
QUALITY	ISO 9001 – ISO 3834-2 - EN 1090-1 Exc 4



***COMPLETED PROJECTS
PHOTOS***

1.RDF SOLID WASTE RENEVATION - MONTAGE & COMM.





2.PROCESS PIPING



3. CRYOGENIC GAS TANK INSTALLATION AND PIPING

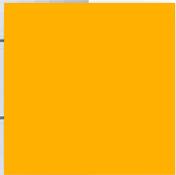


4. FIRE FIGHTING SYSTEM PIPING AND INSTRUMENTS



5. FIRE FIGHTING SYSTEM PIPING AND INSTRUMENTS-II







Cooling Water Circuit Field Application



Fire Pump Panels (UL / FM Certified)



6. FIRE FIGHTING SYSTEM PIPING & INSTRUMENTS -III





Insulation and Piping



Tank and Insulation



Serpentine Manufacturing

7.REFERANCE AT E+PC



AIR SEPERATION UNIT



HYDROGEN PLANT



Instrumentation



Cap Exchange



Nitrogen Tank Revision



8.REFERANCE AT CIVIL CONSTRUCTION



AIR SEPERATION UNIT



HYDROGEN PLANT

8



OIL WASTE STORAGE BUILDING



9. REFERENCE AT FOOD PROCESS (HYDROGENIZE MARGARINE)



The logo for YUDUM, featuring the word "YUDUM" in a bold, green, sans-serif font. Above the letter "U" is a stylized red butterfly with two wings.

9



YUDUM

10. ELECTROMECHANIC DISPLACEMENT OF PIPELINE AT METRO CIVIL CONSTRUCTION



11. LIN -LOX CRYOGENIC TANK AND EVAPORATOR PRODUCTION



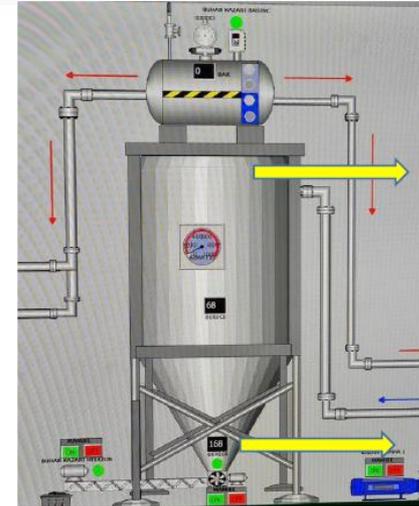
 **tezcan**
GALVANİZ



 kagem Dünya Enerji ve Endüstriyel Sistemler A.Ş.		
www.kagem.com.tr 0 216 314 15 04		
CE		
EKİPMAN TİPİ TYPE OF EQUIPMENT	LOX-LIN-LAR	
İMALATÇI SERİ NO MANUFACTURER SERIAL NO	CC-081/ 2020	
DİZAYN KODU DİZAYN CODE	EN 13458	
	İÇ TANK INNER VESSEL	DIŞ TANK OUTER VESSEL
MAX ÇALIŞMA BASINCI MAX WORKING PRESSURE	15 Bar	1 Bar
TEST BASINCI TEST PRESSURE	22,8 Bar	2 Bar
DİZAYN SICAKLIĞI DİZAYN TEMPERATURE	-196 C	+50 C
KAPASİTE CAPACITY	20.000 LT	
RADYOGRAFI	% 100	
EMNİYET AYAR BASINCI SAFETY SET PRESSURE	16 Bar	
HİD. TEST / FINAL TEST	21- 11 - 2020	02- 12 - 2020
MALZEME METARIAL	1,4301/1- 4307	S235 JR
BOŞ AĞIRLIK EMPTY WEIGHT	9,800 KG	
İZOLASYON INSULATION	PERLİT + VAKUM	
KONTROL CONTROL	TÜV AUSTRIA	0408



12. FLUID BED –WASTE GAS SYSTEM REVISION AND DRUM PRODUCTION



Waste Gas System
Revision





**Fluid Bed Boiler
Revision**



**Pressurized Drum
with CE marked**



13. LINDE-ILGAZ COLD BOX STRUCTURAL REPAIR



14 SHW BIOMASS PLANT'S EQUIPMENTS



SHW
Storage & Handling Solutions

14 SHW BIOMASS PLANT'S EQUIPMENTS



15 PRESSURIZED EQUIPMENTS



16. LINDE GAS – HP GAS FILTERS



17 LINDE GAS - DOW AKSA CHEMICALS



18. TEZCAN HYDROGEN CONDENSER-CE CERTIFIED

$P_{\text{ç}} = 27 \text{ Bar}$

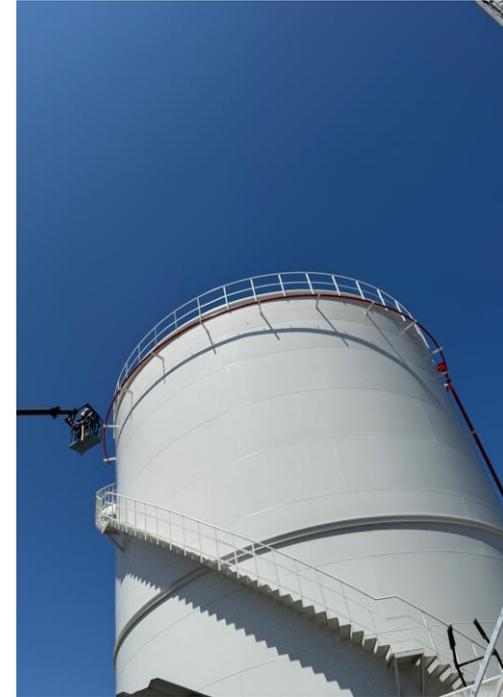


19. SILOXA - ACTIVE CARBON SILO



20. RB KARESİ -MEG STORAGE TANKS

2 x 4200 m³



21. FORD - SCISSOR LIFT FOR TRUCKS



22. FLAKT GROUP – COOLING SKID



23. TEZCAN GALVANİZ – H₂ CONDENSER INSTALLATION AND INSULATION



24. LINDE GAS – INSTRUMENTATION





REFERENCES

REFERENCE AT SEVERAL SECTORS



LINDE TÜRKİYE
LINDE -USA



REFERENCE AT SEVERAL SECTORS



REFERENCE AT ENVIRONMENTAL AND ENERGY SYSTEM



KAGEM ADRESS:

Factory Adress :

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