

RMRS Project Case for Pressure Vessel & Heat Exchanger (Russia)



Project Overview

These pressure vessels and heat exchangers are used on ships used for offshore seafood harvesting in Russia, mainly for the cultivation of live seafoods. According to the Russian certification regulations for offshore equipment, these equipment must comply with Russian classification society certification.



Definition of RMRS

Russian Register of Shipping (RS) certification is a certification issued by the Russian Maritime Register of Shipping to ensure the safety of ships, offshore installations, people, and cargo at sea, as well as to prevent pollution. This certification covers ship design, construction, and inspection, as well as the testing of equipment, materials, and products. While it is voluntary, it is mandatory for equipment used on Russian Register ships and installations.



Technical documentation required for RMRS

The following technical documentation shall be submitted to the Register before manufacture of heat exchangers and pressure vessels is commenced:

1. construction drawings with sections and descriptions, giving all necessary data for checking the calculations and structures (scantlings, materials, electrodes, location and dimensions of weld seams, fastenings, heat treatment methods to be used, etc.);
2. construction drawings for the components, unless all necessary data are shown in the drawings mentioned ;
3. valve replacement with technical data;
4. strength calculations made in accordance with this Part for components subject to pressure other than valves, flanges and fastenings if the latter comply with the standards approved by the Register;
5. calculation of cross-sectional area of safety valves;
6. welding process;
7. bench test programme.



On-site testing request for RMRS

1. Material Inspection.

Materials must conform to approved technical specifications and documentation and bear appropriate markings and manufacturer's certificates.

2. Inspection of Welded Joints.

Welding materials must conform to approved technical specifications and documentation and bear appropriate markings and certificates. The scope of inspection of butt welds and the selection of control methods (external inspection of the weld surface, mechanical testing of weld specimens, and testing using non-destructive testing methods) must comply with the technical documentation approved by the Register; the scope of control must at least comply with the provisions of Part XIV, "Welding," of the Rules for Classification and Construction of Ships.

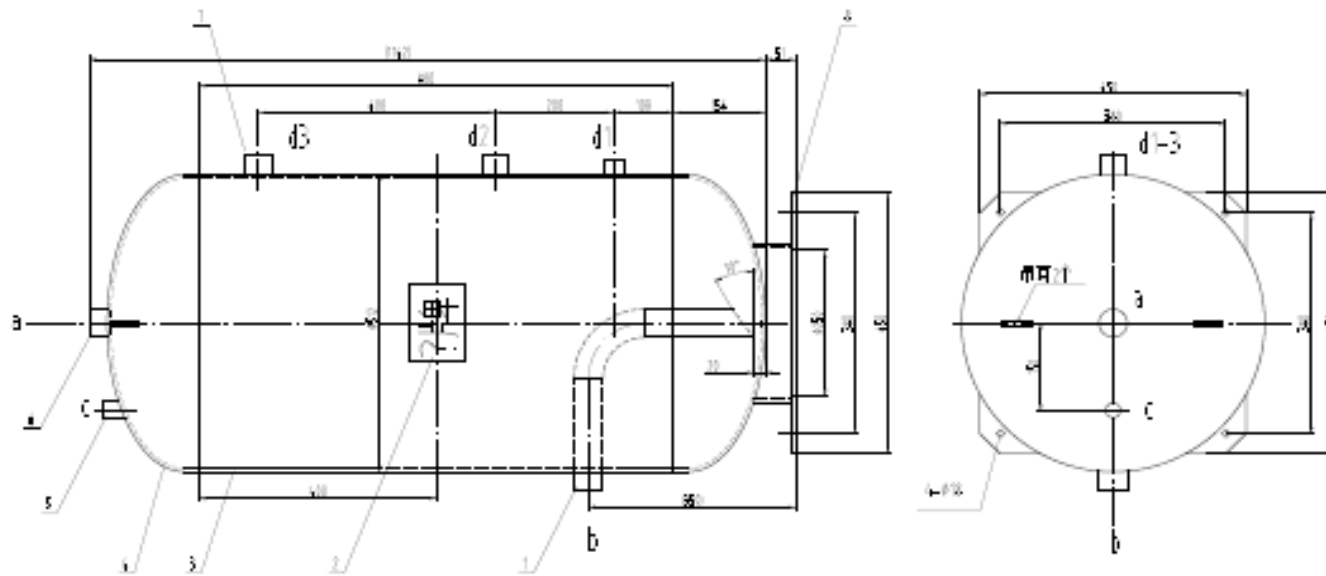
3. Manufacturing Verification of Product Parts and Components.

Assembly

Prior to assembly, product parts must be inspected for conformity to the drawing dimensions.

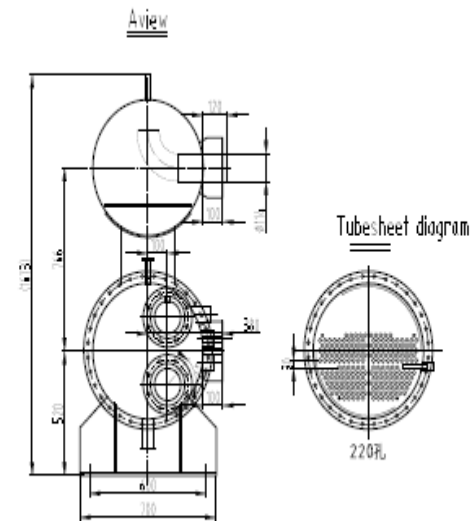
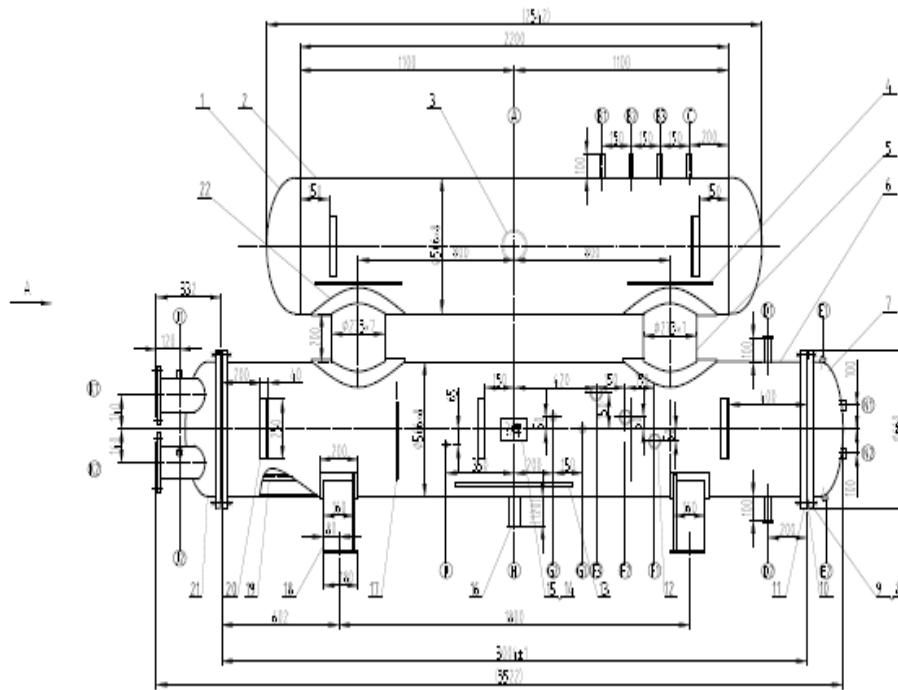


Design Drawing for Liquid Receiver

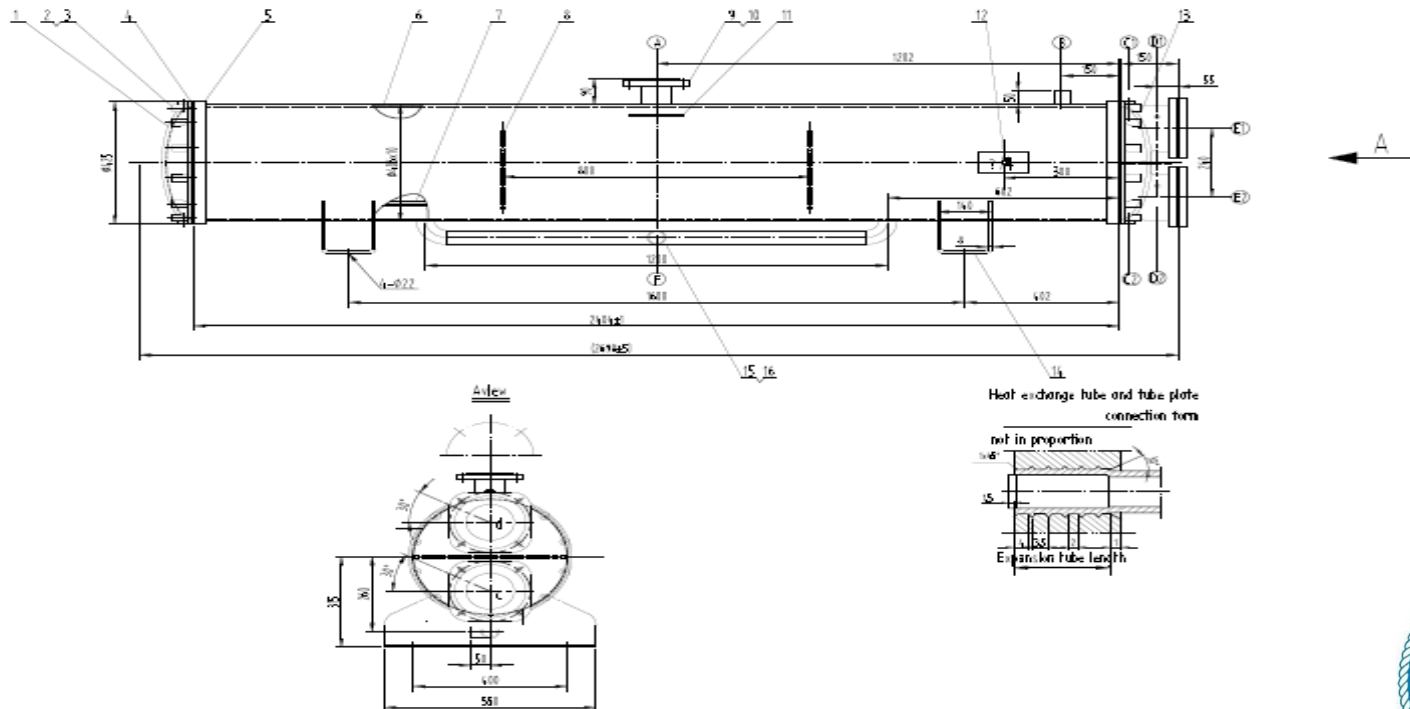




Design Drawing for Shell & Tube Evaporator



Design Drawing for Shell & Tube Condenser



RMRS Testing Photos





H.Stars Group

RMRS Product Package Photos



Container Loading Photos





RMRS Certified Pressure Vessel Advantages

1. Market Access

It is one of the mandatory requirements for pressure vessels to enter the Russian and other Eurasian Economic Union (EAEU) markets. At the same time, RS certification is also recognized by high-end maritime fields such as Arctic, ice shipping and liquefied natural gas (LNG) carriers, helping your products expand into the special ship market.

2. Authoritative endorsement

RS is a full member of the International Association of Classification Societies (IACS), and its certification enjoys a high reputation in the international maritime community. Passing its rigorous inspection is equivalent to declaring to customers that your products have reached international advanced levels in safety and quality.

3. Technical Recognition

During the RS certification process, products must pass a series of extreme environmental tests, such as ultra-low temperatures of -60°C and nuclear radiation resistance. This fully demonstrates the product's reliability and safety in harsh operating conditions and is a strong testament to its technological strength.

4. Industry versatility

In many shipbuilding and marine engineering projects, it is a common entry threshold for equipment to hold a classification society certificate consistent with that of the shipyard and major equipment suppliers. RS certification can ensure that your pressure vessels can be successfully matched with projects such as icebreakers and LNG ships jointly built by China and Russia.