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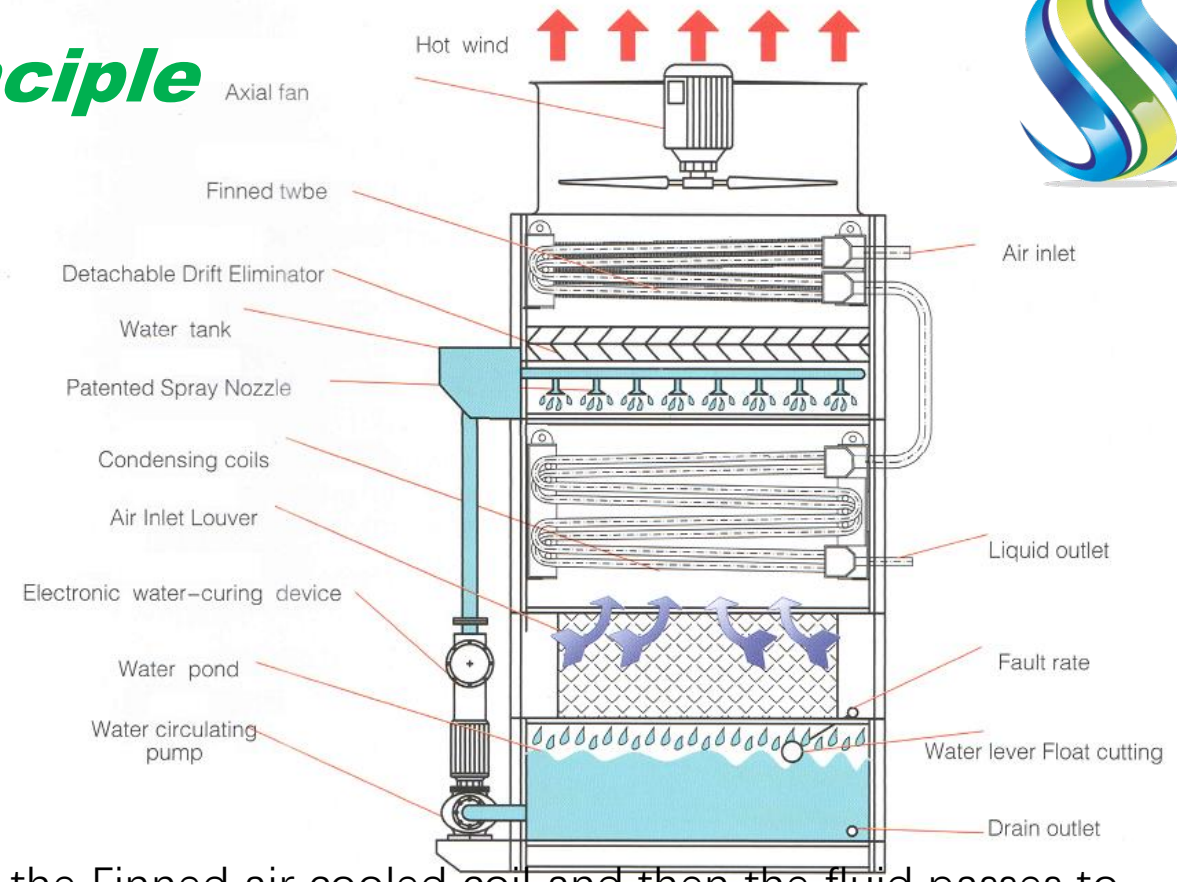
SPL-HC SERIES
CHEMICAL HIGH EFFICIENCY
HYBRID COOLER

Shanghai Baofeng Machinery Manufacturing Co., Ltd

SPL-HC Series is designed and developed for high efficiency cooling for high temperature and high pressure work fluid in chemical industry.

SPL products fill the gap that methyl alcohol (synthesis ammonia) producing systems use energy saving hybrid equipment in refrigeration, process industry and heat exchange domestic markets, and develop the new ideas of latent heat exchange to be a substitute for sensible heat exchange.

Operation Principle



The SPL Hybrid Cooler consists of the Finned air cooled coil(dry), Snake shaped water cooled coil(wet), Spray water device, Drift eliminator(removable) and Water basin. The external part of the cooler is equipment with water circulating pump, Electronic De-scaling Cleaner and Axial Fan(s) on top of the condensing coil.

During operation, the cooling water from the water basin is pumped to the condensing coil evenly forming a thin layer of water film. The induced draft created by the Axial fan(s) draws ambient air from the lower side into the machine and flows over the air cooled coil.

The high temperature steam (work fluid) is pre-cooled by the Finned air cooled coil and then the fluid passes to the condensing coil where major portion of heat is absorbed. The cooled liquid flows out from the lower portion of the condensing coil.

Part of Cooling water evaporates on the coil and drawed out to the atmosphere by the axial fan. The remaining cooling water flows down into the basin for recycling, before which it is cooled by coming in contact with the fresh air drawn from the side louvers.

Main Features :

1. Patented high technology heat exchange design mechanism.
2. High efficiency, energy saving and environment friendly.
3. Compact and easy to assembly
4. Easy and safe to operate
5. High quality manufacturing and inspection to ensure long lifetime

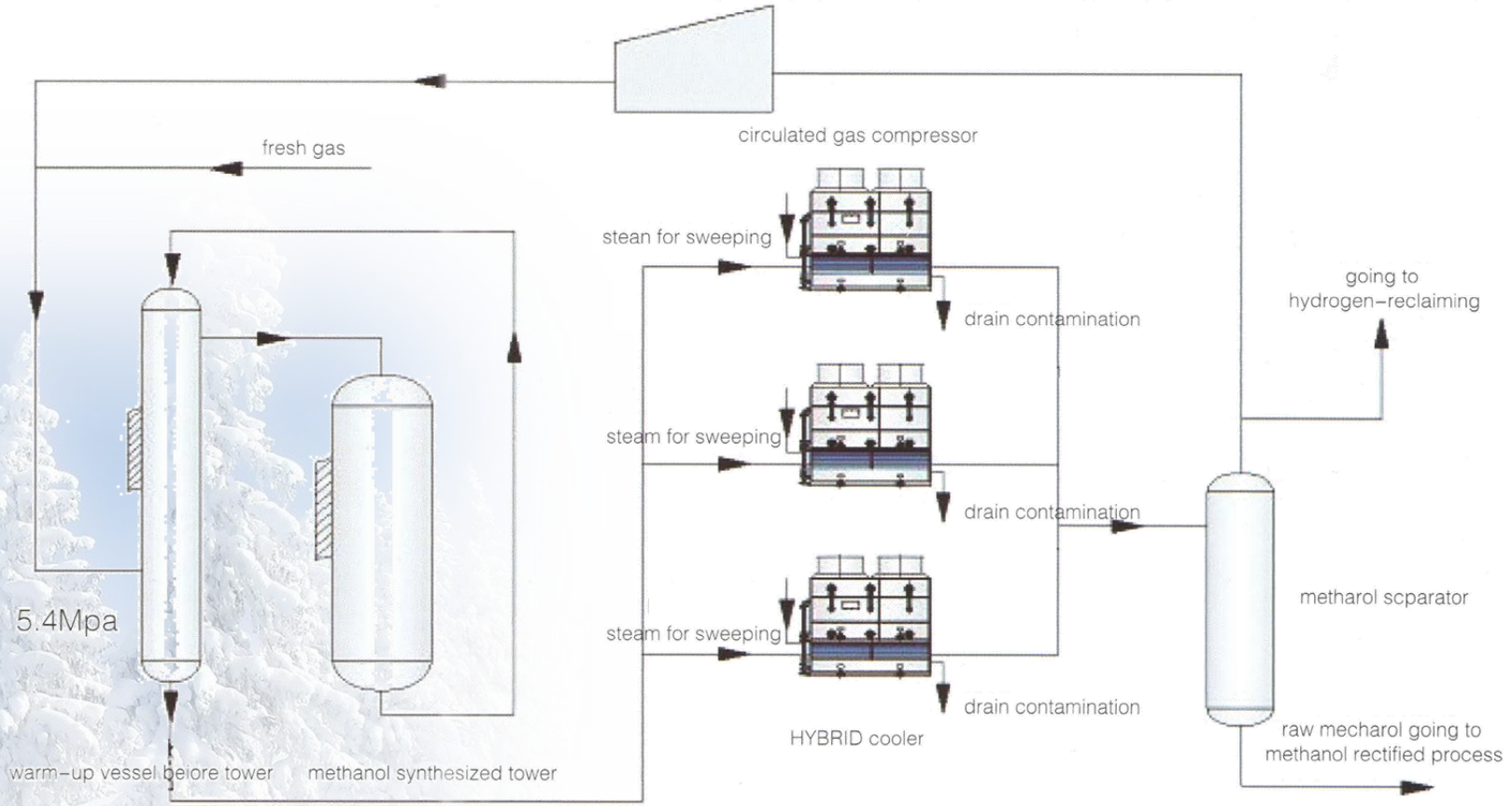
Main Application Situations:

- The gas cooling between the compressor levels in the process of methanol or ammonia;
- Cooling or condensing of synthesizing gas in producing methanol;
- Cooling or condensing in the process of methanol-rectifying;
- Cooling gas for natural gas or coke oven gas conversion process;
- Purification process cooling or condensing;
- carbamide waste gas recovery;
- Steam condenses for steam turbine;

Condensers used in methanol synthesized under low pressure

Features:

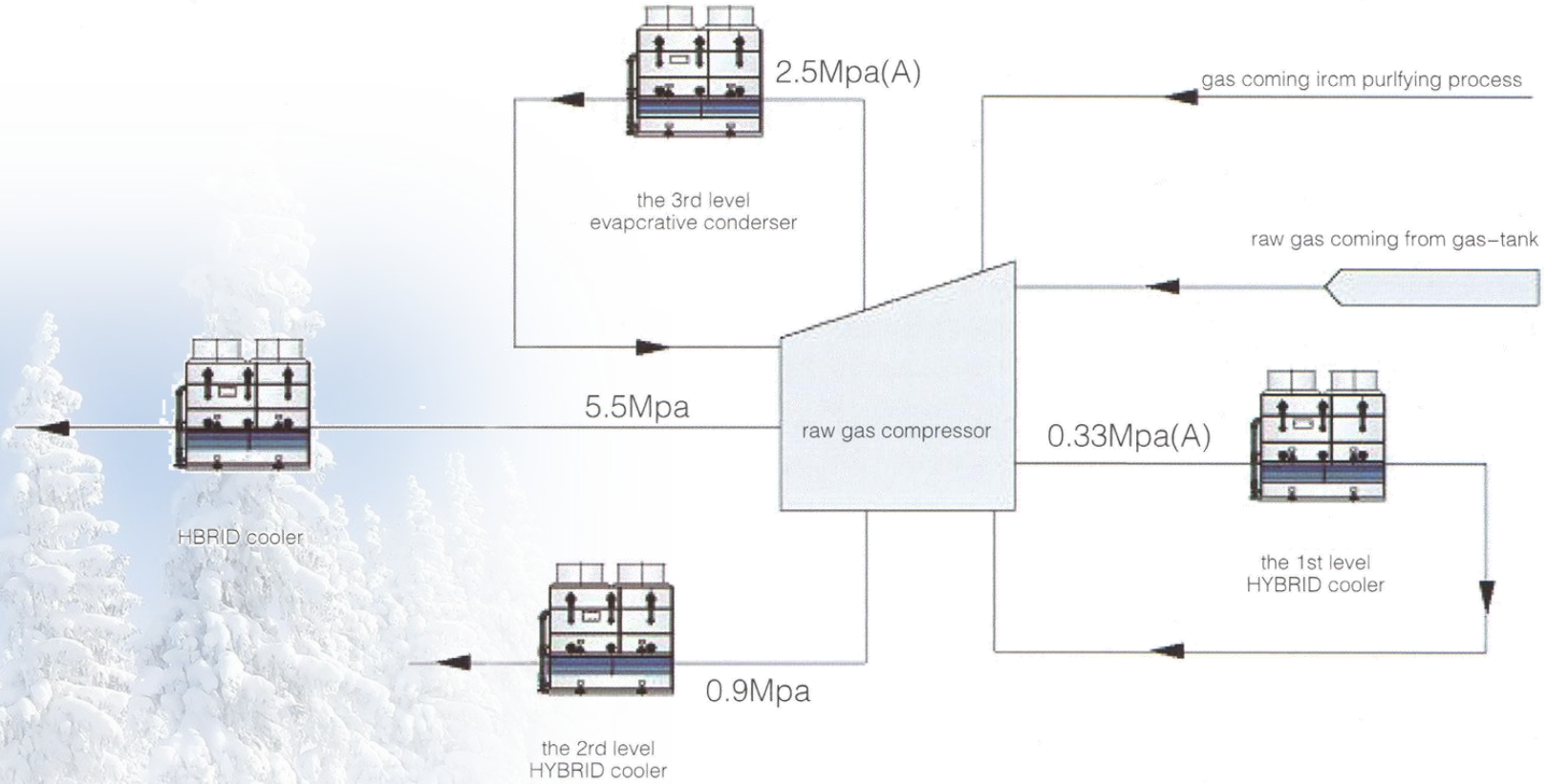
1. *Binary complex structure, high efficiency heat exchange, reducing the scaling;*
2. *Tube Coils inside the condenser to eliminate heat stress and reduce damage caused by vibration.*
3. *Special design structures to remove wax easily.*



Condensers used in methanol compressing process

Features:

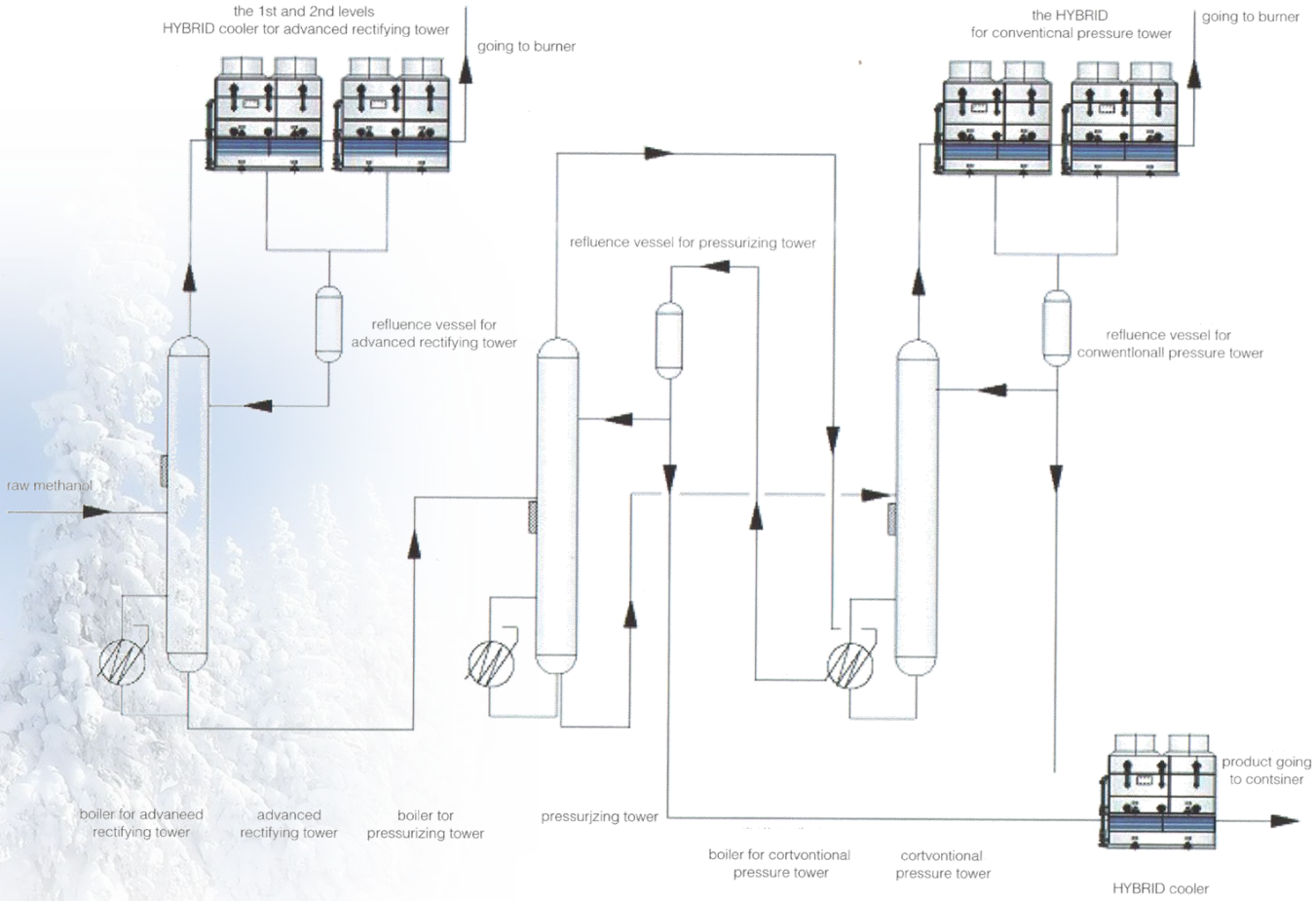
1. *Binary complex structure, high efficiency heat exchange, reducing the scaling;*
2. *Low drift rate, power saving and water saving.*
3. *Simple layout of pipelines, simple cleaning of the rar inside the tubes.*



Condensers used in methanol rectified under low pressure

Features:

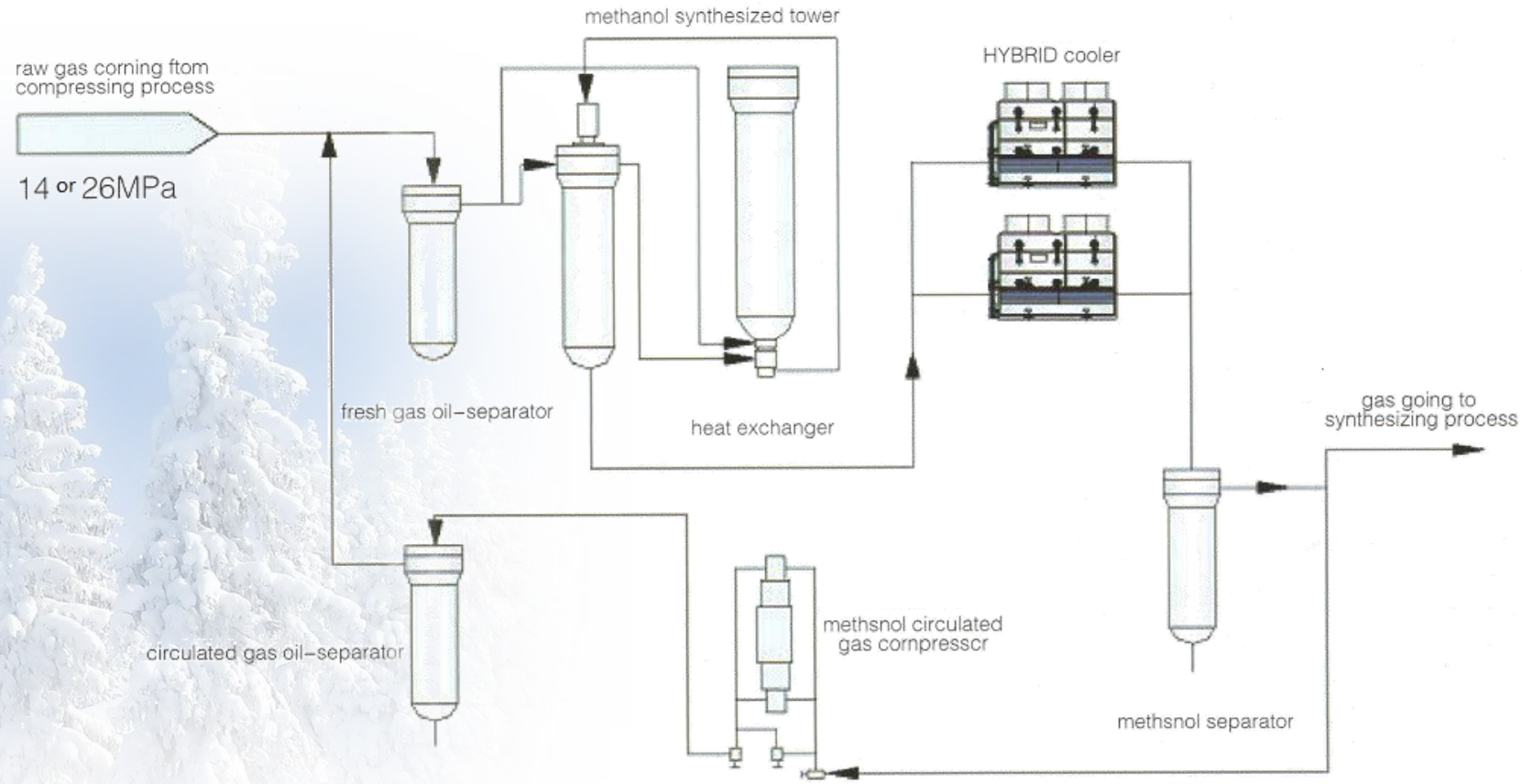
1. *Improving the heat efficiency by design of multi-module and multi-tube;*
2. *Automatically adjusting the operating parameters to accurately control the process goals.*



Condensers used in ammonia synthesized under middle(high) pressure with byproduct methanol

Features:

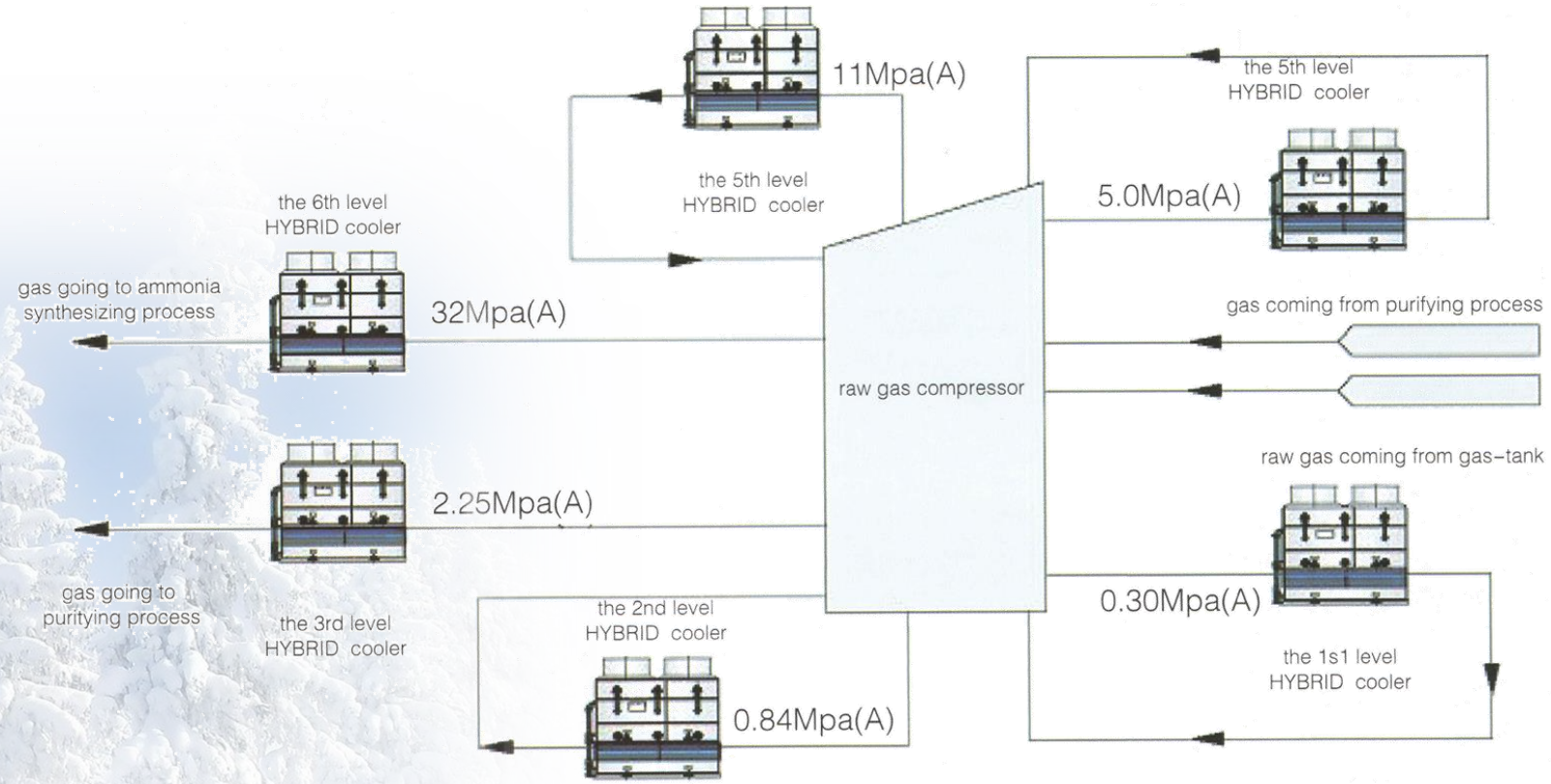
1. *Binary complex structure, high efficiency heat exchange, reducing the scaling;*
2. *Tube Coils inside the condenser to eliminate heat stress and reduce damage caused by vibration.*
3. *Special design of structures to remove wax easily.*



Condensers used in ammonia compressing process

Features:

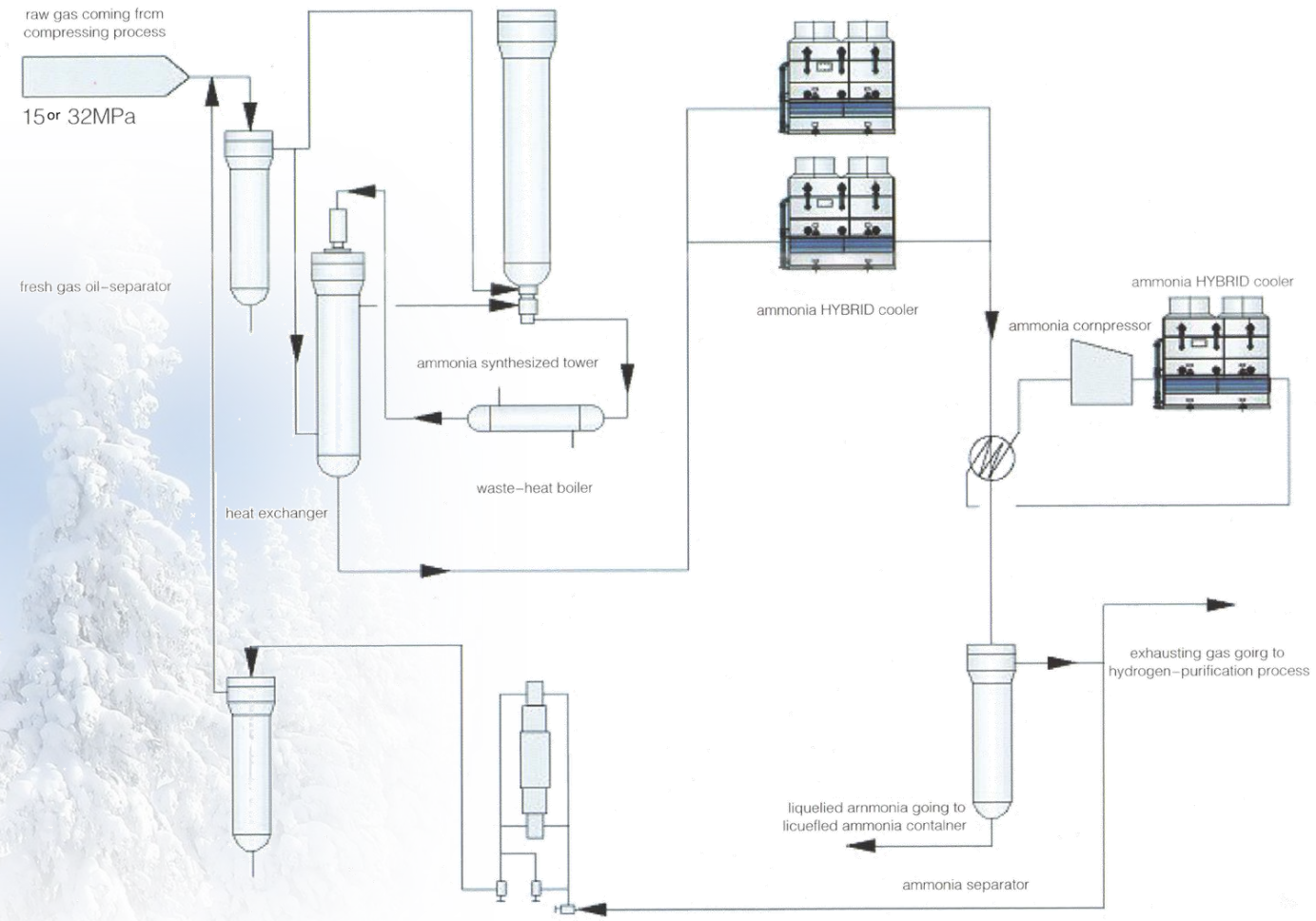
1. *Binary complex structure, high efficiency heat exchange, reducing the scaling;*
2. *Low drift rate, power saving and water saving.*
3. *Simple layout of pipelines, simple cleaning of the rar inside the tubes.*



Condensers used in ammonia synthesized

Features:

1. *Binary complex structure, high efficiency heat exchange, reducing the scaling;*
2. *Low drift rate, power saving and water saving.*
3. *Simple layout of pipelines, simple cleaning of the rar inside the tubes.*
4. *Automatically adjusting the operating parameters to accurately control the process goals.*



Order Requirement

The design technical datas need to provide :

Items	Techical Datas
Process name	
Cooling position	
Working pressure	
Operating temperature	
Fluid ingredients	
Atmospheric conditions	
Material requirements	
Dimensions requirements	
Others	

Please provide us with your data and requirements as detailed as possible, from which we can make suitable customized design solutions for your applications.

Thank you!

CONTACT US *for more …*

Parag Jain

Director

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