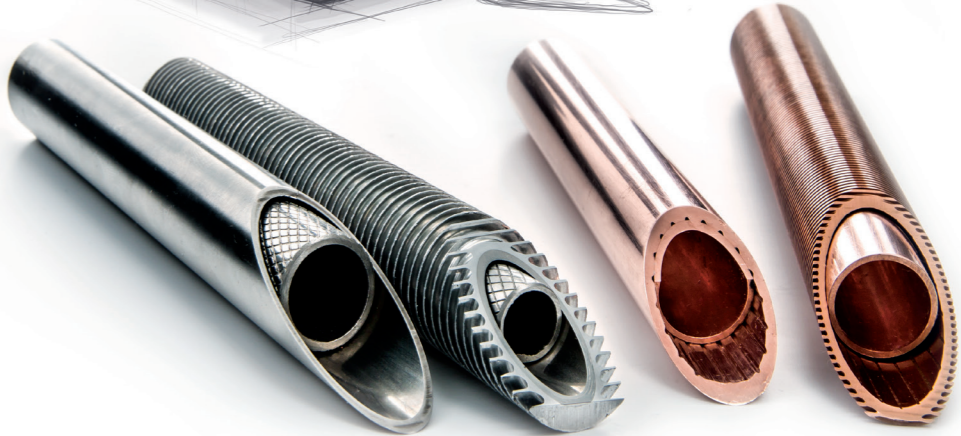
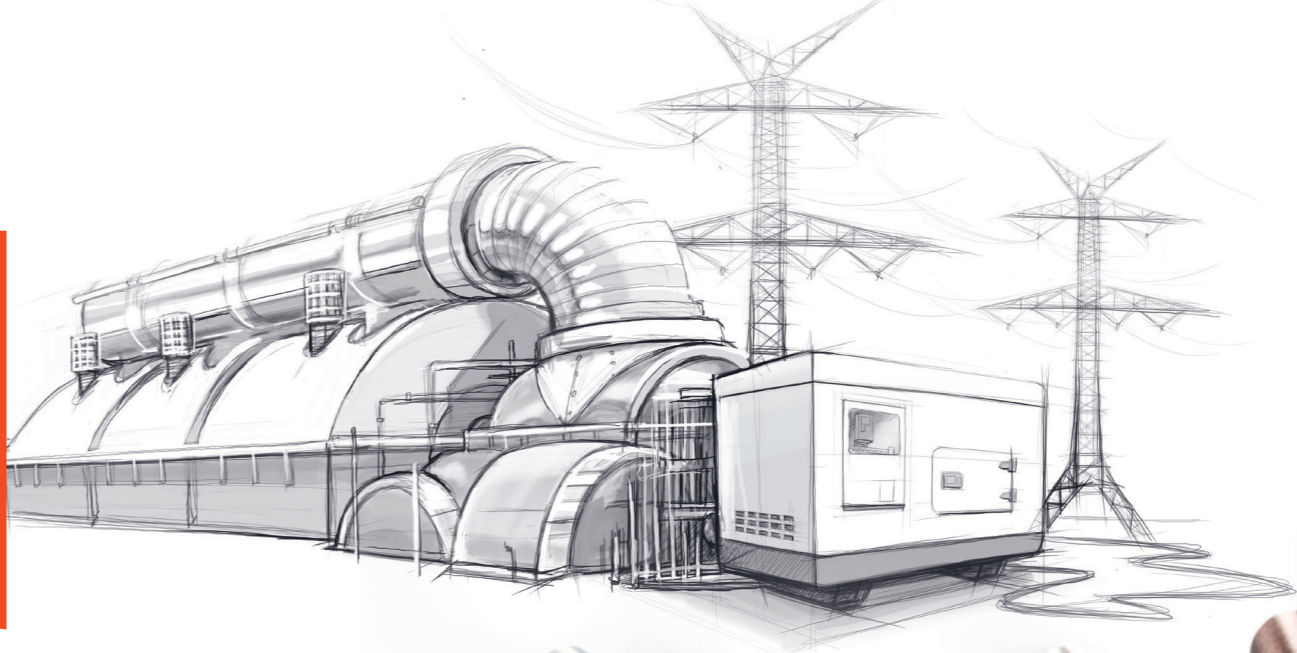


ABSOLUTELY RELIABLE MEDIA SEPARATION
BEST HEAT TRANSFER | SAFE | EFFICIENT

in out



INNOVATIVE SPIRIT.

OUTSTANDING RESULTS.

For further information please contact

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2018.02.06_PP_en_P_Sc_0_GSK_(GSK/PI)

GEWA-safe tubes

GEWA-safe – DOUBLE-WALL SAFETY TUBES – SAFE AND EFFICIENT

NO TOLERANCE FOR CROSS-CONTAMINATION

Whether production processes with highly reactive media, the heating or cooling of food, nutrition or tap water – there are applications where there is no tolerance concerning contamination.

ABSOLUTELY RELIABLE SEPARATION OF FLUIDS

GEWA-safe tubes are a tube-in-tube solution featuring defined leakage paths in the tube wall.

COMPACT DESIGN

GEWA-safe tubes enable a very compact design of safety heat exchangers, reducing material and labour costs as well as heat exchanger footprint.

HIGHEST SYSTEM AVAILABILITY, EFFICIENCY AND SAFETY

Leakages of inner or outer tube are immediately recognisable and can be fixed as part of scheduled maintenance schemes. The excellent thermal conductivity is a result of the metallic contact between the two tubes and provides superior heat transfer as compared to solutions using heat transfer fluid.

DIFFERENT TYPES

Depending on the application, the tubes are available

- with either plain or enhanced outside surfaces,
- in copper, copper-nickel, carbon and stainless steel as well as in material combinations,
- in either loose or already bonded version.

in ———— out

OUR SERVICES

- **Engineered quality** | Finely adjusted material and mechanical conditions result in ideal heat transfer.
- **Wide material range** | Copper, copper-nickel, stainless steel, carbon steel and material combinations, optimized for your application with ideal bonding.

YOUR BENEFITS

- **Reliable and safe** | Fluid separation due to double wall design with leakage detection.
- **Efficient** | Excellent heat transfer due to metallic contact without heat transfer fluid.
- **Highest system availability** | Early leakage detection facilitates scheduled maintenance.
- **Compact and economical** | More compact heat exchanger design, less footprint.

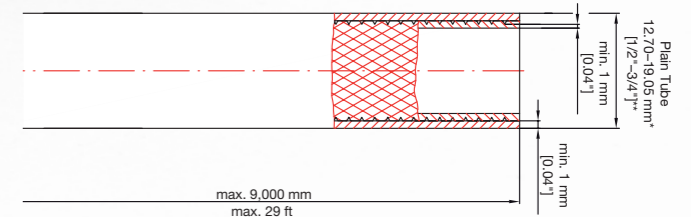
APPLICATION EXAMPLES

- pre-heating of fuel gas for gas turbines
- protection against environmentally harmful substances
- transformer oil water cooler
- drinking water protection according to EN 1717 in heat-pump systems
- heat recovery systems

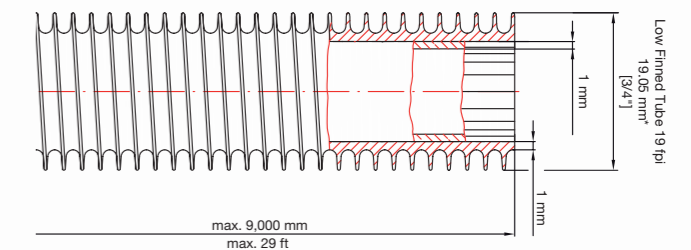


TUBE CONFIGURATIONS

GEWA-safe plain



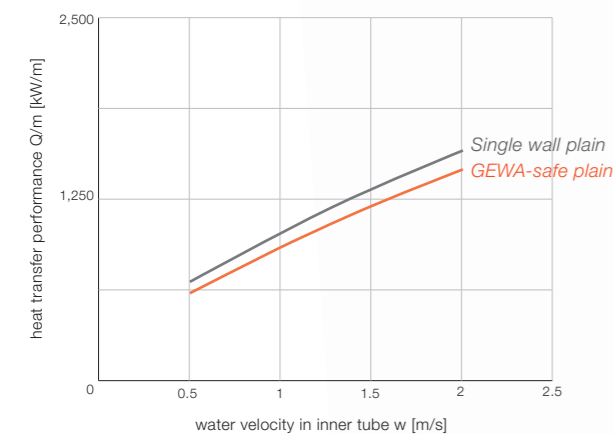
GEWA-safe finned



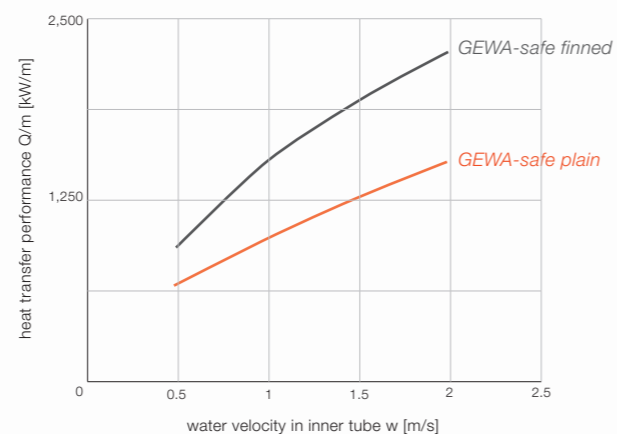
*other dimensions on request

COMPARISON OF HEAT TRANSFER PERFORMANCE

GEWA-safe plain vs. single wall tube



GEWA-safe plain compared to GEWA-safe finned



Test conditions:

tube-in-tube measurement, media: annulus space water @ w=1 m/s, inside tube water, dT=10 K, outside diameter=19.05 mm

Tube configuration	- outside: plain or enhanced - inside: plain or with grooves for improved heat transfer - leakage paths: longitudinal grooves and diamondback structure
Materials	- copper, copper-nickel - stainless steel, carbon steel
Tempers	- as drawn / as finned - annealed
Versions	- loose - bonded