

PROJECT REPORT

PR2727/96



HiTRAN[®] Thermal Systems Technology

DELIVERS NEW TEG INTERCHANGER PERFORMANCE AT DISTRIGAZ IN A SINGLE SHELL

PLANT

Gas Storage Facility, Loenhout, Belgium

SERVICE

Lean/rich triethylene glycol interchanger

EXCHANGER

TEMA type BEM, 1 tube pass
88 tubes: 19.05 x 1.65 x 6096
(3/4in. x 16 bwg x 20ft.)
Shell diameter = 250 mm



PROBLEM

In order to avoid very large heat exchangers, conventional practice is to design these units as multiple shells, often type BEU, with due account of the departure from true countercurrent flow. Furthermore, the lean viscous glycol is usually selected to flow on the shellside.

SOLUTION

As part of an aquifer gas storage expansion, UK supplier KCC Process Equipment took maximum advantage of heat transfer enhancement in a new skid-mounted gas dehydration unit. Cal Gavin designed the TEG interchanger with lean glycol flowing tubeside in a true countercurrent single pass BEM arrangement.

BENEFIT

The customised HiTRAN Matrix Elements employed, dramatically reduced the required surface area with 525kW transferred between lean and rich TEG streams in a single shell. As well as direct capital reductions, the indirect savings in size, weight, pipework, valves and room for access, can be a very attractive proposition to process operators, both onshore and offshore.

INSTALLATION

October 1996

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