



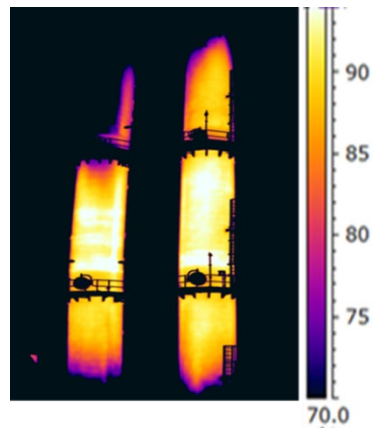
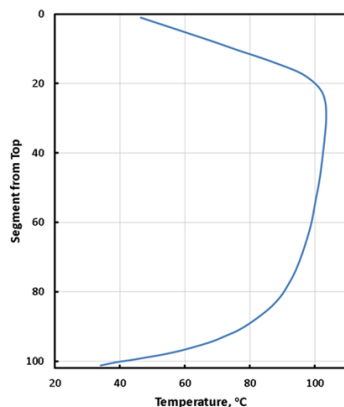
Best Simulator for LNG Facilities

Initial Design... Revamps... Optimization... Troubleshooting...

ProTreat® is the only commercially available simulator consistently proven in LNG applications using piperazine promoted MDEA solvents as well as DEG® and ADEG® for CO₂ removal. ProTreat has been 100% mass transfer rate based since inception.

ProTreat has been *tested* in designing and troubleshooting AGRUs in large scale LNG plants around the world, from Australia to Alaska to Africa and offers unprecedented reliability, accuracy, and predictive power. Get answers you can trust.

- In a recent troubleshoot of one of the AGRUs in a very large scale, multi-train LNG plant, the two parallel absorbers were found to be running extremely hot, although still meeting the < 50 ppmv CO₂ specification. The temperature profile predicted by ProTreat is compared with a thermal image here...



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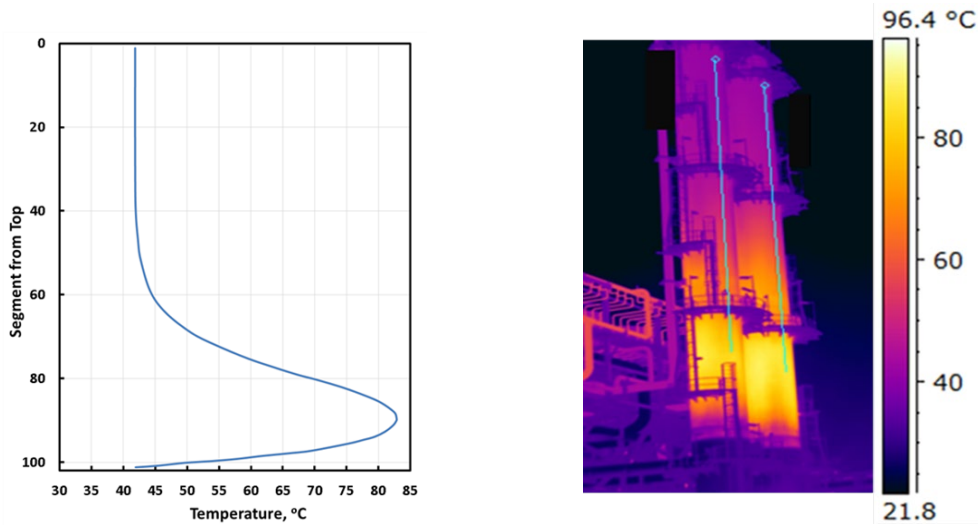


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Buda, Texas, +1 512 312 9424

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With measured outside skin temperatures approaching 100°C there were concerns about serious corrosion in the upper parts of these absorbers, where there was no stainless cladding. The absorbers were running with less than 75% of the design solvent flow (piperazine + MDEA). After increasing the solvent flow to a value closer to the design rate, the absorbers operated with temperatures profiles shown here...



The bulge temperature was still warm (80–85°C) but the peak was in the bottom part of the towers where they are stainless steel clad so there are no corrosion concerns. Incidentally, the measured and simulated CO₂ levels in the treated gas were 2 ppmv and 1 ppmv, respectively.

ProTreat has the remarkable ability to predict performance consistently and with uncanny accuracy, using only information you can read from equipment drawings and spec sheets. Mellapak Type-X structured packing was used in the columns shown here. Other cases have used other structured packings, as well as random packings such as Raschig SuperRings®.

LNG plants are very costly to build and operate. ProTreat removes unnecessary risks associated with guessing HETPs and tray efficiencies and producing a suboptimal design or, worse, a design that just doesn't work, requiring a very difficult and expensive revamp. If you're going to simulate the performance of structured and random packing reliably in this application, there is absolutely no substitute for a real mass transfer rate-based simulator.

Optimize your design and build a plant you can be certain will perform as expected!



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