

MD Trays – Damaged

Pre Job Info: The customer had been experiencing an erratic bottoms temperature profile, as well as unstable operation of the column for several weeks ever since an upset in the unit. From their instrumentation and analysis, they were confident the problem was in the bottom half of the column, but they could not pinpoint the cause of the trouble. The customer called TowerScan in the morning; a crew was on site that afternoon.

TowerScan Results: The trays involved were MD or multi-downcomer trays. Due to their generally tight tray spacing, and the large amount of metal in the form of boxed downcomers, it is very important to obtain precise scan line orientation. In addition, the trays should be scanned at a 1" interval rather than the normal 2" increment or a significant loss of definition occurs.

TowerScan had performed a baseline scan on the same tower, offline, four years earlier (blue plot). The current scan in red revealed that the bottom tray (45) was missing, and the next tray up (44) was severely damaged. With this knowledge the engineer was able to adjust the operating parameters in order to manage the damaged tower in the best way possible. In addition, they were provided with adequate planning time for them to go into the tower during their next shutdown, which was less than a month away, knowing what had to be fixed.

