NOTICE

ERATUM

"An outer-approximation algorithm for a class of mixed-integer nonlinear programs" by Marco A. Duran and Ignacio E. Grossmann

[Mathematical Programming 36 (1986) 307–339]

The solution that was reported in Table 4A with $z^* = 7.7891$ is suboptimal. The optimal solution is;

$z^* = 8.0641$,

$y^* = [1, 0, 0, 0, 0, 1, 0, 1, 0, 0, 0, 0, 0, 0, 1, 0, 1, 0, 0, 1, 0, 0, 0, 0, 1]$,

$x^* = [2.0, 7.7924, 6.0556, 3.5732, 4.0]$.

This solution was found by resolving Test Problem No. 4 on an IBM 3090/400 with 5 FPS Array Processors at the Cornell Theory Center, Ithaca, NY. MPSX [1] was used for solving the MILP master problems, and MINOS [2] for solving the NLP subproblems. With the 25 binary variables set to 1 as starting point, 6 iterations were required with a total CPU-time of 14.6 sec (MILP master problems: 10.8 sec, NLP subproblems: 3.8 sec).

[1] IBM Mathematical Programming Systems Extended/370 (MPSX/370), Basic Reference Manual, IBM, White Plains, NY (1979).
[2] B.A. Murtagh and M.A. Saunders, MINOS 5.0 Users Guide, Technical Report SOL 83-20, Systems Optimization Laboratory, Department of Operations Research, Stanford University, CA (1986).