Energy, Mines and Resources Canada | Énergie, Mines et Ressources Canada

CANMET

Canada Centre for Mineral and Energy Technology | Centre canadien de la technologie des minéraux et de l'énergie

CORRELATION OF ASTM STABILITY WITH JAPANESE INDUSTRIAL COKE DRUM INDICES - UPDATE

by J.F. Gransden, W.R. Leeder and J.C. Botham

NOVEMBER 1978

Prepared for third meeting of ISO/TC27/SC3
London, England, November 1978.

ENERGY RESEARCH PROGRAM
Energy Research Laboratories
Report ERP/ERL 78-89 (OP)

CORRELATION OF ASTM STABILITY WITH JAPANESE INDUSTRIAL COKE DRUM INDICES - UPDATE

A previous document (CANMET Report 77-47) presented correlations between the ASTM stability factor, S, and Japanese industrial drum indices, using cokes from 18 and 12-in. width technical-scale ovens. Subsequently, additional data were generated in tests using 2 x 3 in. coke, and used to recalculate the correlations involving the Japanese indices JIS DI_{15}^{30} and JIS DI_{15}^{150}.

Figures 1 and 2 show the data and lines of best fit obtained from a Hewlett Packard 9810A programmable calculator with standard statistical packages. The results may be summarized as follows:

$$DI_{15}^{30} = 60.21 + 1.13\ (S) - 0.00946\ (S^2) \qquad \text{(Figure 1)}$$

$$n = 182 \qquad r = 0.84$$

$$DI_{15}^{150} = 38.32 + 1.25\ (S) - 0.00817\ (S^2) \qquad \text{(Figure 2)}$$

$$n = 161 \qquad r = 0.90$$

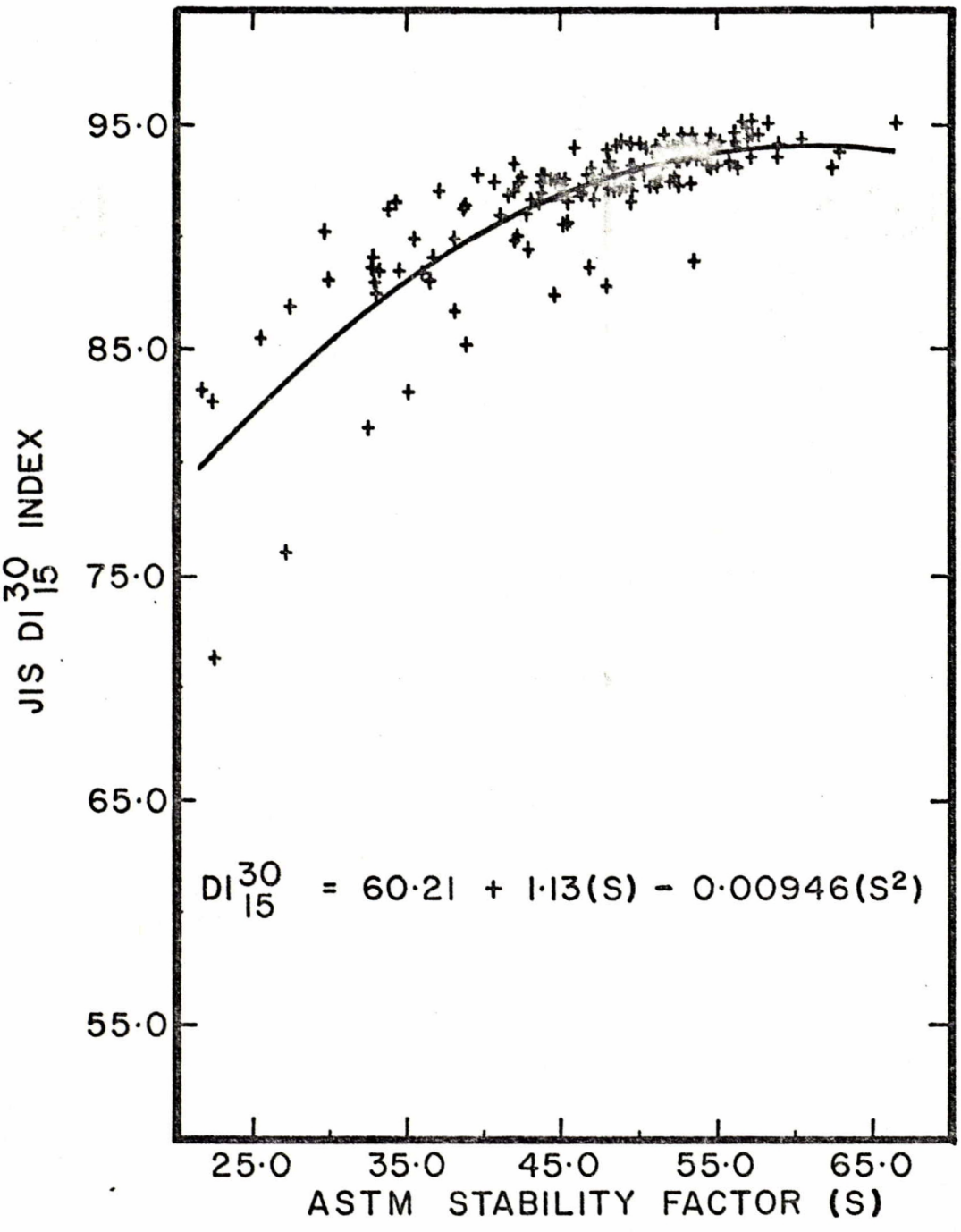
95·0
85·0
75·0
65·0
55·0
JIS DI^{30}_{15} INDEX
DI^{30}_{15} = 60·21 + 1·13(S) − 0·00946(S^2)
25·0
35·0
45·0
55·0
65·0
ASTM STABILITY FACTOR (S)

FIGURE 1

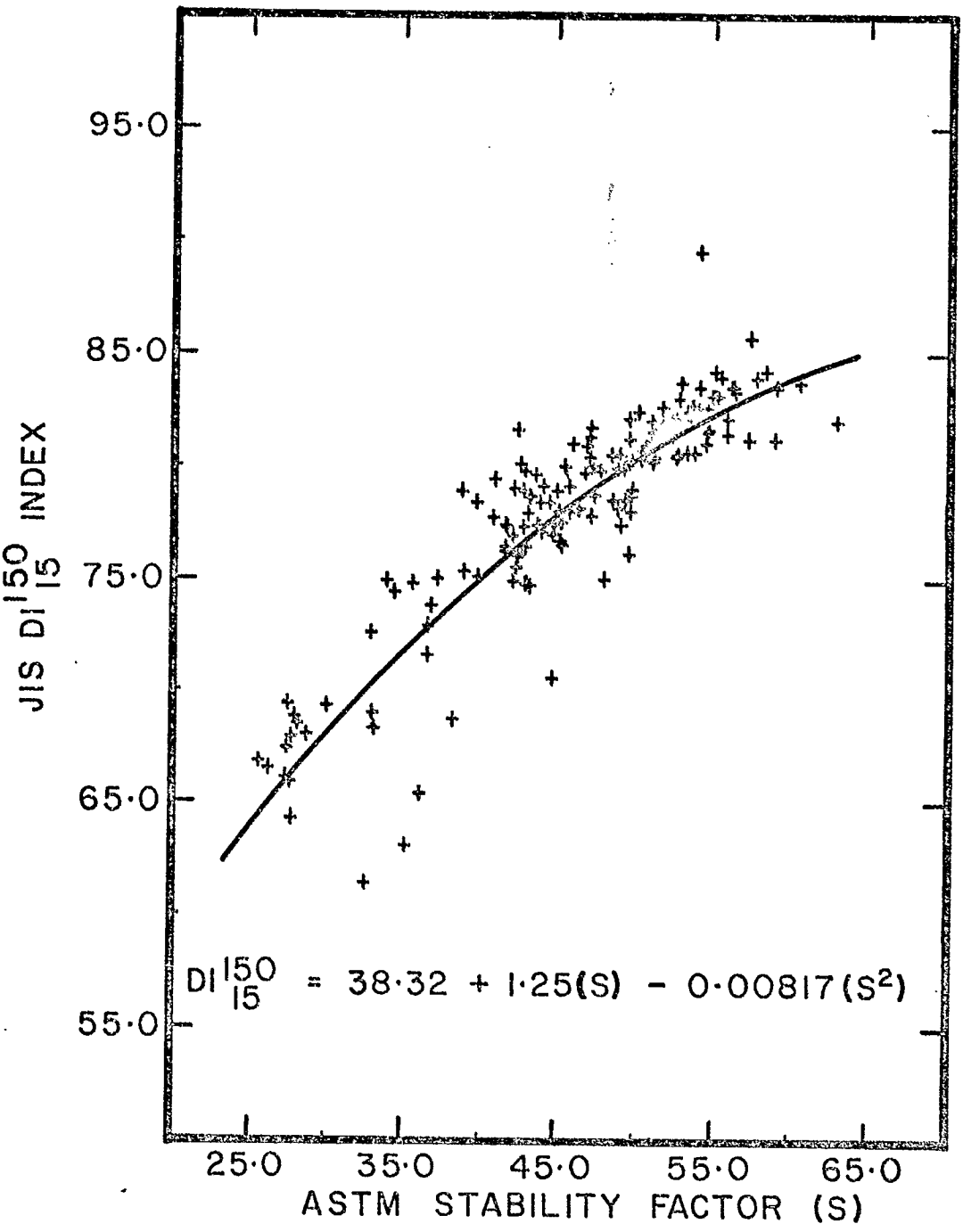
95·0
85·0
75·0
65·0
55·0
JIS DI^{150}_{15} INDEX
DI^{150}_{15} = 38·32 + 1·25(S) − 0·00817(S²)
25·0
35·0
45·0
55·0
65·0
ASTM STABILITY FACTOR (S)

FIGURE 2