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Smith and Wollensky [4] have ascertained that the stress factor on metal parts varies with the amount of heavy metal ions included in such metal composition. According to Bishop et al. [1], this variance takes on an exponential factor not unlike that shown in the Mathew's Variable Rate Differential (see Mathew [3, p. 45]). Wing stress tests conducted by the Max Einschuss Laboratory [2] have verified such findings.

References

- Bishop, A.H., Brown, I.B., & Baker, Z.T. (1978). A review of the limits of stressography. International Journal of Metal Stress 61:455-497.
- Einschuss, M. (1987). Laboratory results: 1978-1986. New York: Cambridge University Press.
- Mathhew, P.B. (1982). A new view on metal stress: The eigenordnung. In P.J. Tucker & S.M. Leder (eds.), A collection of new wave engineering. Peabody, MA.: Autumn-Orange Press, pp. 104–112.
- Smith, T.D. & Wollensky, A.R. (1987). Certain new factors in metal stress research. Unpublished doctoral dissertation, University of Nevada, Las Vegas. (Available on request from A.R. Wollensky, 724 Cameron Drive, Cleveland, OH 44202.)

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