

N/S ratio. A sampling frequency of 100 Hz was used, the records of which contained 300 points. An identification model had degrees of freedom with ℓ of Eq. (3) equal to 2 and p of Eqs. (22) and (23) for an MCF calculation equal to 3. The pseudomeasurements were obtained by a 2 sample delay of the original 10 measurements. For the least squares solution, the matrix $[\phi]$ was of dimensional 210×40 .

The same responses were analyzed using the full matrix Ibrahim time domain (ITD) with both single and double least squares solutions (SLS and DLS).⁵ The theoretical and identified results are listed in Table 1 with information on the required computer storage and execution time. The information on the computations should be regarded in the relative sense for comparison, since they are functions of the computer used.

Conclusions

The proposed time domain approach (STD), which is based on the direct use of sparse upper Hessenberg matrix, promises the following advantages:

- 1) Reduced computer storage and time.
- 2) Higher identification accuracy.
- 3) No biased errors were noticed in the identified damping factors.
- 4) User-selected parameters are reduced.
- 5) Actual mode participation is automatically computed.
- 6) The computation of the modal confidence factors is performed as a postidentification procedure, thus having no effect on the identification procedure.

7) The identification procedure can use any number of measurements even larger than the order of the identification model.

8) Multitest and or multi-initial excitation responses can be used simultaneously.

Further evaluation, studies, and applications of the proposed algorithm are needed to further verify its merits.

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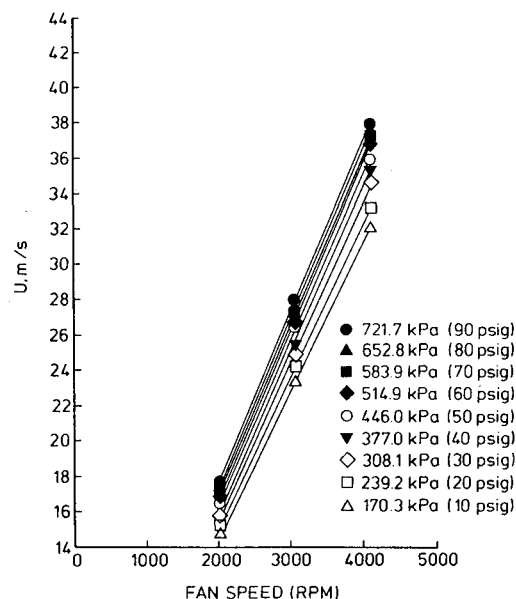
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Readers' Forum

Errata: "Performance of High-Power Spark Gaps"

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FIGURE 6 on page 1114 was incorrectly printed. The correct figure is shown below.



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