Experimental database for detecting and diagnosing rotor broken bar in a three-phase induction motor

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I. DATABASE ORGANIZATION

The database is organized as a structure of the Matlab application. The “struct_healthy” structure presents the experimental data referring to the defectless induction motor, “struct_r1b” referring to the rotor with one broken bar, “struct_r2b” referring to the rotor with two broken bars, “struct_r3b” referring to the rotor with three broken bars and “Struct_r4b” for the rotor with four broken bars.

When loading the files containing the experimental data for each structure in the Matlab application, it will be possible to view the experimental data for each of the mechanical loads imposed on the motor shaft. Then, it will be possible to observe the experimental data for each monitored variable, see Figure 1.

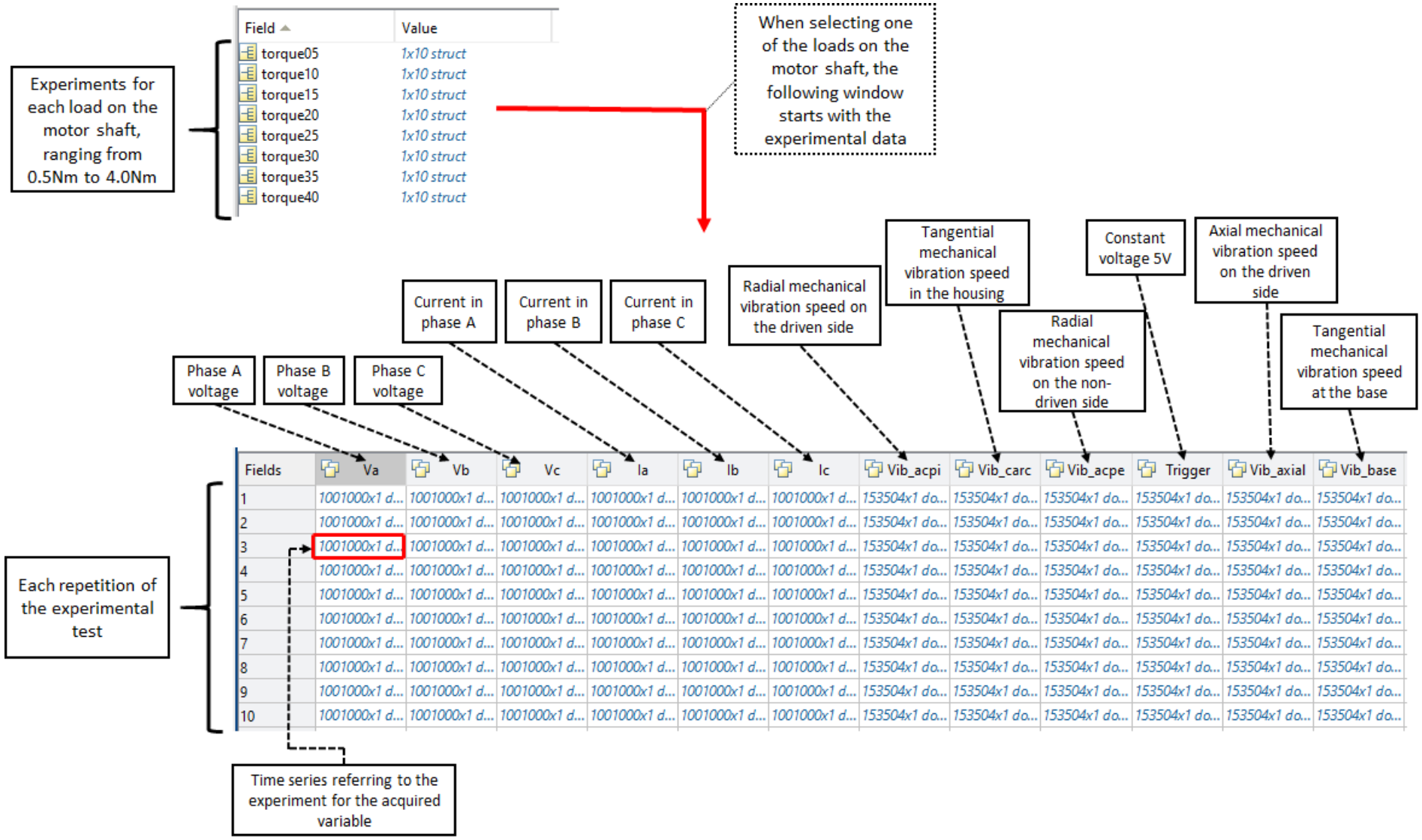

Figure 1: Schematic representation of the way data is organized.