Stage III. *Functional model achievement and specialized software experimentation*

In this stage, the functional model for *"Equipment for stress relieving by mechanical controlled vibrations with a.c. motor and microprocessor"* was achieved at ICMET.

The parameters of the vibratory stress relief equipment are the following:

a. single-phase supply voltage 220 V, 50 Hz±10%;

b. maximum power absorbed from the mains 2.5 kVA;

c. speed range: 0 to 5000 r.p.m.;

d. duration of the stress relieving cycle: about. 30 min, maximum 10 min for each selected resonance peak;

e. possibility of working in two duties:

- MANUAL duty
- AUTOMATIC duty

f. the equipment is endowed with Epson printer for the diagrams of rotor current versus speed;

g. possibility of self-diagnosis and finding the faulty blocks;

- not-connected printer
- not-supplied printer
- out-of-paper or jammed paper
- supply cable improperly mounted
- hardware fault

For participating in the programme FP7, the following actions were performed:

- posting on CORDIS website the project idea "Ecological technology for decrease of residual stress in metallic construction welded using vibratory stress relief equipment" with a view to finding partners;

- posting on Energy FP7 website (financed by the Program CEEX, module III);

- participating in Brookerage, FP7 – ICT Cooperation Market Budapest, 5 July 2007.