Manual for testing different constitutive models with Incremental Driver

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This installation manual is composed to provide constitutive modellers or users all required software for running the element test program `Incremental Driver` (`IncDr`) developed by [1] in Fortran. It is written for the operating system Windows, and is intended to be further extended in future for additional operating systems. It contains information how to implement constitutive models in User Material (UMAT) subroutines which can be linked with `IncDr`. For this purpose, the following steps may be followed:

- install Visual Studio (VS) Community from
  https://visualstudio.microsoft.com/de/vs/community/
  hereby, one may simply register with a valid E-Mail address.
- install the Intel oneAPI Base Toolkit from
  https://www.intel.com/content/www/us/en/developer/tools/oneapi/base-toolkit.html#gs.zsrw6n
- install the Intel oneAPI HPC Toolkit from
  https://www.intel.com/content/www/us/en/developer/tools/oneapi/hpc-toolkit.html#gs.zsru1v

Download the files (Fortran Project, Incremental Driver, material models etc.) from my repository: https://github.com/MeritaTafili/REV-wIncDr/tree/main/Session%201. Please note, that a .vfproj - file is also available there (Fortran Project) so that everything runs pretty much out of the box in VS once the required packages are installed.

References

[1] A. Niemunis. Incremental Driver User's manual. , 2008. available from www.pg.gda.pl/∼aniem/an-liter.html.