KO-MIX

Interní seminář pracovníků KMD

Srdečně zveme pracovníky KMD, KAP a další zájemce z řad veřejnosti
na přednášku pořádanou v rámci odborného semináře *KO-MIX*

Numerical results of the shape optimization problem for the insulation barrier

Přednáší: **RNDr. Petr SALAČ, CSc.** (KMD, FP TU v Liberci)

Termín: **Pondělí 23. května 2016 od 15:20 hodin**

Místo konání: **Kabinet KMD a KAP**

             (Univerzitní nám. 1410/1, Liberec, budova G areálu TUL - 4. patro)

Abstrakt přednášky:

The contribution deals with the numerical results for the shape optimization problem of the system mould, glass piece, plunger, insulation barrier and plunger cavity used in glass forming industry, which was formulated in details at AMEE'15.

We used the software FreeFem++ to compute the numerical example for the real vase made from lead crystal glassware of the height 267 [*mm*] and of the mass 1,55 [*kg*]. The plunger and the mould were made from steal, the insulation barrier was made from Murpec with the coefficient of thermal conductivity $k = 0, 2$ [*W/m.K*] and the coefficient of heat-transfer between the mould and the environment was chosen to be $\alpha = 14$ [*W/m^2.K*]. The cooling was implemented by the volume $V = 10$ [*l/min*] of water with the temperature 15 °C at the entrance and the temperature 100 °C at the exit.

The results of the numerical optimization to three required target temperatures 700, 750 and 800 °C of the outward plunger surface together with the distribution of temperatures on the interface between the plunger and heat source before and after the optimization process are presented.

Za organizátory semináře srdečně zve

                     Václav Finěk