Příloha 6 – Zdrojový kód 3 programu FDS

Zdrojový kód programu FDS

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&HEAD CHID = 'zkusebni_horak', TITLE = 'Reakce fasady MORE-CONNECT na ohen - pozarni zkouska stredniho rozmeru'/
&TIME T_END = 30 / ... délka simulace (sec)
&DUMP DT_RESTART = 5.0 /
MISC RESTART = .TRUE. /

********** výpočetní oblast + síť výpočetních objemů (buněk) **********
&MESH IJK = 10, 600, 8, XB = 0.0,0.1, 0.0,1.2, 0.0,0.016 /
        výpočetní oblast    - síť 2 mm (pro Y,Z)
                            - síť 10 mm (pro X) 48 000 buněk
********** materiály **********
*** ocelová trubka ***
&SURF ID                ='TRUBKA'
        MATL_ID         ='OCEL'
        COLOR           ='GRAY'
        THICKNESS       = 0.002 /
&MATL ID                ='OCEL'
        DENSITY         = 7850.
        CONDUCTIVITY    = 50.0
        SPECIFIC_HEAT   = 0.44 /

********** plochy na hranici výpočetní oblasti **********
&VENT XB = 0.0,0.1, 0.0,1.2, 0.0,0.0, SURF_ID = 'OPEN' /          spodek
&VENT XB = 0.0,0.0, 0.0,1.2, 0.0,0.016, SURF_ID = 'INERT' /       zadní bok
&VENT XB = 0.1,0.1, 0.0,1.2, 0.0,0.016, SURF_ID = 'INERT' /       přední bok
&VENT XB = 0.0,0.04, 0.0,0.0, 0.0,0.016, SURF_ID = 'INERT' /      čelo levé (levá část od trubky)
&VENT XB = 0.06,0.1, 0.0,0.0, 0.0,0.016, SURF_ID = 'INERT' /      čelo levé (pravá část od trubky)
&VENT XB = 0.0,0.1, 1.2,1.2, 0.0,0.016, SURF_ID = 'INERT' /       čelo pravé
&VENT XB = 0.0,0.1, 0.0,1.2, 0.016,0.016, SURF_ID = 'OPEN' /      horní část

********** HOŘÁK **********
*** ocelová trubka ***
&OBST XB = 0.04,0.04, 0.0,1.2, 0.0,0.016, SURF_ID = 'TRUBKA' /    zadní strana
&OBST XB = 0.06,0.06, 0.0,1.2, 0.0,0.016, SURF_ID = 'TRUBKA' /    přední strana
&OBST XB = 0.04,0.06, 0.0,1.2, 0.016,0.016, SURF_ID = 'TRUBKA' /  horní část
&OBST XB = 0.04,0.06, 0.0,1.2, 0.00,0.00, SURF_ID = 'TRUBKA' /    spodní část

*** vyvrtané otvory (pomocí HOLE) ***
&HOLE XB = 0.039,0.061, 0.098,0.104, 0.006,0.012 /    otvor  Pr1 (6x6mm)
&HOLE XB = 0.039,0.061, 0.298,0.304, 0.006,0.012 /    otvor  Pr2 (6x6mm)
&HOLE XB = 0.039,0.061, 0.496,0.504, 0.004,0.012 /    otvor  Pr3 (8x8mm)
&HOLE XB = 0.039,0.061, 0.696,0.704, 0.004,0.012 /    otvor  Pr4 (8x8mm)
&HOLE XB = 0.039,0.061, 0.894,0.904, 0.004,0.014 /    otvor  Pr5 (10x10mm)
&HOLE XB = 0.039,0.061, 1.094,1.104, 0.004,0.014 /    otvor  Pr6 (10x10mm)
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********** DIFUSOR, VITR **********

&SURF ID='WIND', VOLUME_FLOW=-0.0011, / ventilátor

&VENT XB = 0.04,0.06, 0.0,0.0, 0.0,0.016, SURF_ID = 'WIND', COLOR ='BLACK', TRANSPARENCY = 0.3 /

********** simulované veličiny **********

*** rychlosti ***

&DEVC XYZ = 0.06,0.1,0.008, QUANTITY = 'VELOCITY', ID = 'VEL_01' /

&DEVC XYZ = 0.04,0.1,0.008, QUANTITY = 'VELOCITY', ID = 'VEL_02' /

&DEVC XYZ = 0.06,0.3,0.008, QUANTITY = 'VELOCITY', ID = 'VEL_03' /

&DEVC XYZ = 0.04,0.3,0.008, QUANTITY = 'VELOCITY', ID = 'VEL_04' /

&DEVC XYZ = 0.06,0.5,0.008, QUANTITY = 'VELOCITY', ID = 'VEL_05' /

&DEVC XYZ = 0.04,0.5,0.008, QUANTITY = 'VELOCITY', ID = 'VEL_06' /

&DEVC XYZ = 0.06,0.7,0.008, QUANTITY = 'VELOCITY', ID = 'VEL_07' /

&DEVC XYZ = 0.04,0.7,0.008, QUANTITY = 'VELOCITY', ID = 'VEL_08' /

&DEVC XYZ = 0.06,0.9,0.008, QUANTITY = 'VELOCITY', ID = 'VEL_09' /

&DEVC XYZ = 0.04,0.9,0.008, QUANTITY = 'VELOCITY', ID = 'VEL_10' /

&DEVC XYZ = 0.06,1.1,0.008, QUANTITY = 'VELOCITY', ID = 'VEL_11' /

&DEVC XYZ = 0.04,1.1,0.008, QUANTITY = 'VELOCITY', ID = 'VEL_12' /

*** barevné iso-plochy (SLICEFile) ... teplotní pole ***

&SLCF PBX = 0.03, QUANTITY = 'VELOCITY', VECTOR = .TRUE./

&SLCF PBX = 0.07, QUANTITY = 'VELOCITY', VECTOR = .TRUE./

&SLCF PBY = 0.1, QUANTITY = 'VELOCITY', VECTOR = .TRUE./

&SLCF PBY = 0.3, QUANTITY = 'VELOCITY', VECTOR = .TRUE./

&SLCF PBY = 0.5, QUANTITY = 'VELOCITY', VECTOR = .TRUE./

&SLCF PBY = 0.7, QUANTITY = 'VELOCITY', VECTOR = .TRUE./

&SLCF PBY = 0.9, QUANTITY = 'VELOCITY', VECTOR = .TRUE./

&SLCF PBY = 1.1, QUANTITY = 'VELOCITY', VECTOR = .TRUE./

&SLCF PBZ = 0.008, QUANTITY = 'VELOCITY', VECTOR = .TRUE./

&SLCF PBZ = 0.01, QUANTITY = 'VELOCITY', VECTOR = .TRUE./

*** hodnoty na hranici výpočetní oblasti ***

&BNDF QUANTITY = 'GAUGE HEAT FLUX' / ... BNDF = boundery file

&BNDF QUANTITY = 'WALL TEMPERATURE' /

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&TAIL / ... konec simulacee