

## ***Discussion***

Some general conclusions, concerning dynamic thermal properties, represented by the response factors and the z-transfer function coefficients, for subsequent types of walls, are as follows:

**Wood-framed wall systems:** Differences of the 3-D dimensionless transfer functions for clear walls and separated details are rather small; resistance differences are more significant.

**Steel-framed wall systems:** Differences of the 3-D dimensionless transfer functions for clear walls and separated details are more significant than for wood-framed walls. The effect of additional layers of brick and stucco, together with the EPS foam layer, is substantial.

**ICF wall - with 3-D internal concrete frame:** With a limited amount of concrete, the wall shows very dynamic thermal properties;  $Y_n$  and  $X_n$  response factors with high indices, decay very slowly,  $b_n$  coefficients are very small. For simulations of the heat flow, to secure sufficient accuracy, one should use much more than 40 response factors; at the same time maximum index for  $b_n$ ,  $c_n$ ,  $d_n$  are respectively only 3, 4 and 2.

**Concrete/foam/concrete sandwich:** Resistance for the wall with plastic ties is significantly higher than for that with metal ties; dynamic properties are similar.

**Heavy concrete blocks:** Dynamic thermal properties for empty blocks are significantly different to those for blocks filled with insulation.