## ACOUSTICS2008/779 Sound Insulation Requirements in Hospitals: comparisons and case studies

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Italian and EU regulations for sound insulation of hospitals are very hard to be satisfied. Especially with reference to sound insulation from outside noise, the simultaneous presence of important sound sources (re-frigerating units, fan and others) and of sensitive receivers (the patients) imposes high requirements for façade sound insulation. Moreover, the necessity to assure high values of natural lighting in interiors imposes the use of large windows in façades. By using the tabular estimation model defined by annex B of the European Norm 14351 for the calculation of the performance of windows and the model of EN 12354-3 for the performance of façades, it is easy to show that the limiting values defined by the Italian Law can be achieved only with a perfect realisation of the building construction. In the paper the comparison between EU regulations for hospitals is shown. Moreover, different case studies of hospital buildings are analysed either with a theoretical approach and with measures carried out in site.