THE SLIPSTD EUROPEAN COLLECTIVE RESEARCH PROJECT: DEVELOPMENT OF SLIP RESISTANT STANDARD SURFACES

Ir. Marcel Engels[(1)], Dr. Giuliano Tari[(2)]

[(1)]FGK Forschungsinstitut für Anorganische Werkstoffe, Glas/Keramik-GmbH, Höhr-Grenzhausen, Germany.
[(2)]Ceram Research Ltd, Stoke-On-Trent, United Kingdom.

ABSTRACT

SlipSTD is a Collective Research project, co-financed by the FP6 programme "Horizontal Research Activities involving SMEs", devised to stimulate the design of tiles for improved slip resistance. This will be achieved through research, testing and development.

In short, the objectives of the project are to:

- *establish fundamental knowledge concerning the influence of surface characteristics in various environments on the slip resistance of ceramic tiles.*
- *assist end-users in the selection of appropriate tiles*
- *promote better understanding of slip resistance issues for manufacturers of ceramic floor tiles and end users to enable them to meet their legislative responsibilities.*

1. INTRODUCTION

The SlipSTD project aims to reduce the number of slip accidents by specifying the main floor surface characteristics associated with slip resistant floorings. This will be achieved by isolating the influence of flooring characteristics from the other factors like footwear, contamination, cleaning, environmental and human factors.

A multidisciplinary approach will be applied to generate the fundamental knowledge of slip resistant surfaces regarding the topography (micro and macro structures) and the relevance of the surface structure in various environments.

Tribological, computer simulation, biomechanical and surface science will be combined to design surfaces with graded levels of slip resistance. The knowledge generated will provide sound guidelines to assist manufacturers to design ceramic tiles with improved slip resistance.

The two major deliverables of the SlipSTD project are:

1. A Publicly Available Specification (PAS)

   This specification defines the requirements needed by the surface of glazed or unglazed ceramic floor tiles to be classified as "slip resistant", including requirements for documentation to be provided with "slip resistant" ceramic tiles, and recommendations for installation and maintenance of "slip resistant" ceramic floor tiles.

   The application of the PAS document should also contribute to separating the responsibility of flooring manufacturers/designers to produce/ specify safe floors from the responsibility of the duty holders for safe in-service maintenance.

   The SlipSTD consortium is finally going to submit the PAS document to the interested CEN technical committees for their consideration as inclusion in a new or existing standard on ceramic tiles or slip resistance.

2. A set of calibrated surfaces with different slip resistance characteristics.

   The calibration surfaces will provide a validation tool for slip resistance measurements (ramp and portable method still to be identified) and a suitable benchmark for flooring manufacturers and the various CEN technical committees working on a harmonised method for measuring slip resistance.

The SlipSTD consortium comprises tile manufacturers, tile manufacturers associations, architects, Health & Safety associations and leading European Research Centres, and the leadership of CEN/TC67 on Ceramic Tiles and CEN/ TC339 "pedestrian safety of floorings" (see Figure 1)

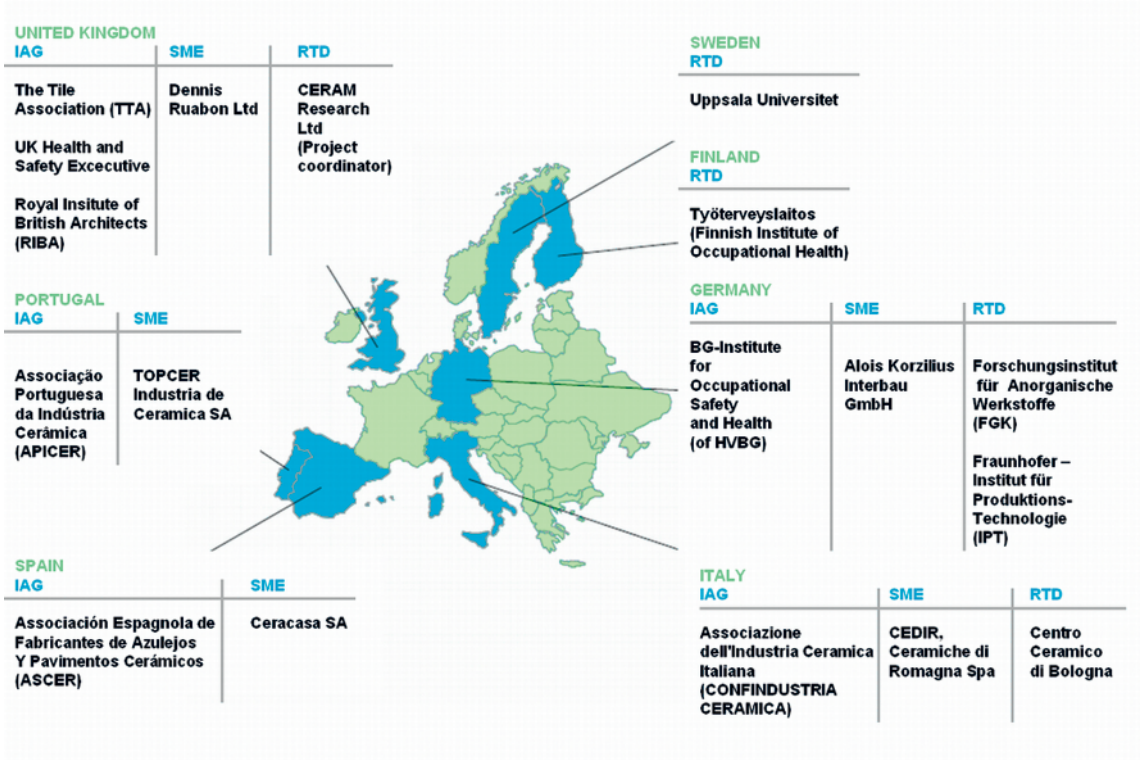

Figure 1. SlipSTD international consortium partners (courtesy of CERAM). SME = small & medium-sized enterprises, RTD = research and technological development, IAG = Industrial Associations and Groupings.

The project started on the 1st August 2006 and will last for 36 months.

SlipSTD project is co-financed by the European Commission through the Sixth Framework Programme for Research and Technological Development (Horizontal Research Activities involving SMEs - Collective Research Scheme).

REFERENCES

For further information, please contact

Project dissemination manager: Mr. Enrico Lupi, CONFINDUSTRIA CERAMICA, Italy.
email: economia@confindustria.it

Project coordinator: Dr Giuliano Tari, +44 (0)1782 764240, Ceram Research Ltd., United Kingdom
email: giuliano.tari@ceram.com

Visit the website: www.slipstd.com