International Group Inc.

The International Group, Inc (IGI) experienced participating in the TEAM course for the first time in 2005/2006. This first project focused on an industry area relatively new to North America – equestrian footings.

Wax-based surfaces for horse training tracks and race tracks were developed in the early 1980's in the UK, from where it spread to Europe, and reached North America by the late 1990's. In a nutshell, wax-based surfaces consist of a blend of sand, wax and fibers, sometimes with additional additives. Although the technology appears to be straighforward at first glance, issues such as the variability of sand from different locations and wax of different types from various locations can result in footings with widely varying consistency. In addition, climate considerations further complicate matters, making the correct choice of wax a crucial factor for the success of the footing. Up to the present time, since there was no predictive evaluation test available, the suitability of a surface formulation was determined by "feel" – a highly unsatisfactory state of affairs for installation projects that can run into hundred of thousands to millions of dollars!

The remit to the TEAM project group (Anil Lal, Bentley Gaikis and Erick Kan) was to develop some simple tests that wax-based footings providers could perform to quantify key aspects of the surface properties. The three students attacked the problem with enthusiasm and a high level of creativity, generating many potentially useful ideas and concepts in the process. The final outcome of the project was four simple tests. Two of these tests were designed and built by the students, and the other two were based on reasonably priced commercially available equipment, sourced by the students. Thorough examination of three representative wax-based surface samples illustrated the appropriateness of the tests. In addition, the test rigs designed by the students will be easy for surface providers to replicate.

Fred Godbille of Du Pont ably acted as industrial advisor for the student team. IGI benefited from the project by now being able to quantify key properties of the surface materials, and enabling our track surface providers with some means of evaluating blends when developing footings formulations. The success of the venture will hopefully lead to more collaborative projects in the future.

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