

The project "TEMPUS - MMATENG"

ных функций. Как правило, таким вновь принятым сотрудникам легче показывать свою эффективность, и продвижение по карьерной лестнице происходит значительно быстрее.

Такое дополнительное корпоративное обучение интегрирует интересы всех заинтересованных сторон процесса – студента, ВУЗа и комбината. Это обеспечивает успешный карьерный рост выпускникам, снижение затрат на подготовку и повышение эффективности работы с кадрами, а также усиление имиджа университета.

Список литературы

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IMPORTANCE OF DISCIPLINE "DAMAGE AND RELIABILITY" IN REFORMING THE CURRICULUM OF MATERIALS ENGINEERING STUDENTS IN THE FRAMEWORK OF TEMPUS-MMATENG PROJECT

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The academic discipline «Damage and Reliability» has been introduced into studying curriculum of Materials Engineering students in Pryazovskyi State Technical University in the framework of TEMPUS-MMATENG project. This discipline is implemented as a module added to the existing discipline «Alloys for Tribotechnical Applications». The principles and content of the course «Damage and Reliability» were

developed and kindly provided by the researchers of Ecole Nationale Supérieure de Chimie (Lille, France) Prof. Jean-Bernard Vogt and Prof. Ingrid Proriol Serre.

The necessity of introducing this discipline (module) was dictated by the exceptional importance of information and knowledge, which carries new discipline. «Damage and Reliability» is focused on the studying the mechanisms of surface and bulk degradation of different kind of metal products like machine parts and tools. It is aimed to studying the mechanical testing (different mechanical tests), corrosion behaviour (different modes of corrosion and its crucial effect on metal degradation), effect of temperature on the failure mode (cleavage, ductile fracture, creep fracture, rupture maps), fatigue failure (fatigue crack initiation and fatigue crack propagation), environmentally-assisted fracture (stress corrosion cracking, hydrogen embrittlement, liquid metal embrittlement, irradiation effect), wear modes (adhesive wear, abrasive wear, erosion). These extensive data could be considered as the reasonable and important background for mastering the main core of discipline «Alloys for Tribotechnical Applications». They will help the students to understand the principles of special alloys constructing, treatment and usage in regard with different working conditions.

During studying «Damage and Reliability» the students have to learn the damage mechanisms of structural materials that result from mechanical loading and from environmental effects. The outcome of studying should be the good knowledge of main fracture mechanisms, identification of fracture surfaces. The students must acquire the ability for expert assesment, for selecting the proper candidate alloy for a machine component, for failure analysis in order to solve the problems and to overcome fracture problems.

All these matters are in the scope of engineers working in the field of materials selections and applications. The graduates should possess the necessary knowledge to be successfully integrated into production domain. Therefore the discipline «Damage and Reliability» is importance and of current interest.