

Consideration of Human Factors in the General Safety Analysis

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The first part of the presentation is an overview about Human Factors in plant safety. In addition to it new approaches for the consideration of Human Factors in the Overall Safety Analysis are presented. Thereby different methods are explained for the use for different common Safety Analysis methods. How to integrate Human Factor into the Quantitative Risk Analysis is shown as well as how to integrate it into Qualitative Safety Analysis. For the quantitative analysis fault tree has been chosen as accident modelling technique. A procedure to identify and analyze underlying Human Factor causes was developed. Combination of the weightings and the audit result for each factor was used to calculate the human factors modification index, which in turn is used to modify the HEPs to reflect the plant conditions. For Qualitative Analysis a new Human Factor Assessment tool, developed by the author, can be used to detect those areas where implementation of Human Factors has to be improved. For these purposes a new module for Operator Action Analysis to evaluate the operator load and/or to optimize the plant design will be demonstrated.