

IDENTIFICATION OF AGEING SIGNS

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Abstract. *Taking into consideration that in analysis we have to deal with many number of NPP components (with a variety of applications), considering also the complexity of ageing processes, and the fact that we have limited resources, there is a need to concentrate the effort on the understanding and managing the safety impact of ageing on key ageing problems and components. The process of identification of ageing signs of the components in order to focus the evaluation effort represents a convenient way of dealing with large information. The paper presents the methods useful in identification of ageing signs, and highlights their advantages and limitations.*

Keywords: ageing, trend, ageing failure mode and effect analysis

1. Introduction

Over the years, the increasing age of components has the potential to deteriorate their performance and by that to jeopardize the operation of the plant in safe conditions.

In order to assure a long and safe operation of the plant, the ageing management should be effective in mitigation of ageing degradation. Measures must be taken to detect ageing degradation and to mitigate it by appropriate maintenance and operational actions.

To evaluate each of plant components in terms of its susceptibility to ageing is a difficult task. Still, we should be aware that the process of evaluation and quantification of ageing degradation for thousand of individual components is not practicable nor is it necessary. Components should be carefully selected and prioritized according to their susceptibility to ageing, in order to maximize the effective use of limited resources and to prioritize the work. The ageing management measure (prevention and mitigation) will be focused mainly on these selected components.

The methods which can be used in determining components susceptible to ageing degradation are the following:

- analysis of operating experience,
- expert judgments.

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