

EPERC TG 1 FATIGUE

Minutes of the TEAMS meeting held on

Friday January 22nd, 2021

14,00 – 17,00 CST

Participants

Participants were EPERC members of several countries.

Guy BAYLAC, Fernando LIDONNICI, Claude FAIDY, Alessandro MASIA, Luca GAETANI, Stefano MILANI, Ralf TRIEGLAFF, Yves SIMONET, Petro GABBIADINI, Davide GADENZ

INTRODUCTION

The meeting began by a presentation of the members of the Task Group. Each member detailed the reasons for his participation in this working group. In general, the goal was the best use of fatigue clauses of EN standards.

The rest of the meeting was according to the agenda distributed by email before the meeting.

1 NEW FATIGUE CURVES with presentation of the work performed in Germany

The new Clause 18 of EN 13445-3 includes a new paragraph 18.10.6.2 which proposes, under certain conditions, new fatigue curves which extend the life of components. The right part of these curves (high number of cycles) is similar to the fatigue curves of the ASME Boiler and Pressure Vessel Code, Division VIII, Section 2, 2017.

2 NEW VALUES OF NO CREEP OF FERRITIC AND AUSTENITIC STEELS

A CEN report on No Creep and Negligible creep of steels, to be published this year, will give the possibility to determine more precise estimates of temperatures of Negligible creep of steels for pressure equipment and the possibility to reduce the risk of creep damage.

3 EFFECT OF HYDROGEN ENVIRONMENT ON FATIGUE DAMAGE

The effect of hydrogen environment resulting of the work of a research program led by the CEA was presented by AIR LIQUIDE during an EPERC Seminar. An action of EPERC in this domain is necessary, due to the development of the use of this gas in the near future.

4 UPDATES OF THE WORK PROGRAM OF THE TG FATIGUE

Updates of the work program taking care of the needs of industry are essential with consideration of the work performed in the different countries of Europe and outside of Europe.

5 Update the status of International Codes for Fatigue Design rules in their last editions,

This update includes examination of different new R&D results and identification of Gaps and Needs.

6 Develop a Task Group 1 FATIGUE ROAD MAP

It is necessary to list and manage all the TG1 activities with delays, budget and Task responsible.

7 The final product of Task Group 1 will be "Recommended Practices for Modern Fatigue Design Rules"

with all the justifications attached.

8 Knowledge transfer through Reports, Workshops, Training and Conference participation

This knowledge transfer is essential.

Guy BAYLAC

Claude FAIDY

2021/02/12