

General

This paper contains the German input for the SDC CG on Evacuations. It references a copy of the original guideline (MSC.1/circ.1238), which has been edited and restructured. In order to mark all changes, the following color coding was used:

- Restructured, copied/pasted text is marked blue
- Edited content is marked red
- New content is marked green

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1 Restructuring

Based on SDC2/14/2, restructuring the guideline is proposed. The goal was to simplify and unify the document. Common paragraphs exist in the annexes of the simplified and the advanced part, so they were moved to Annex 1. This has no effect on the technical content of the document. Deleted parts in the annexes have not been marked in order to keep the document clear. Special changes were:

1. In order to unify the document, the awareness duration of the simplified method was changed to response duration as in the advanced method.
2. The word “time” was changed into the physically correct word “duration”.
3. Annex 1, 3.1.1: Since sometimes a difference between crew and passenger assembly stations is made, both words are introduced.

2 Documenting Results

Based on FP56/6 and SDC2/14/2, additional Annex 1, Chpt. 1 *General* has been extended by the following content:

1. The goal of the analysis is to prove, that the vessel meets the set performance standard.
4. Areas of counter and crossing flows of large numbers of passengers and crew should be pointed out to create awareness.
5. The results of the evacuation analysis should somehow reach the crew.

In addition, Annex 1, Chpt. 6 *Documentation* has been extended by para .8.

3 Using Additional Information

Based on SDC2/14/2, Annex 1, 4.2 and Annex 3, Appendix 1, 4 have been extended in order to allow for using more detailed data regarding person distribution whenever available.

5 Additional Scenarios

Based on FP56/6 and SDC2/14/2, two additional possible scenarios have been added to Annex 1, 4.2. They are not fully specified yet, this will follow, once an agreement has been reached on which scenarios to add. Since the variance of results grows by the number of different parameters, the number of calculations needed is increased to 500 (Annex 3, Appendix 1, 5.2) in order to allow for a reliable evaluation.

Fig. 1 shows, why a larger number of simulation runs is key to a reliable evaluation. The results shown have been gained through 500 simulations. If only 50 runs would have been analysed, it could not be guaranteed, that the few cases leading to very large durations would have been detected.

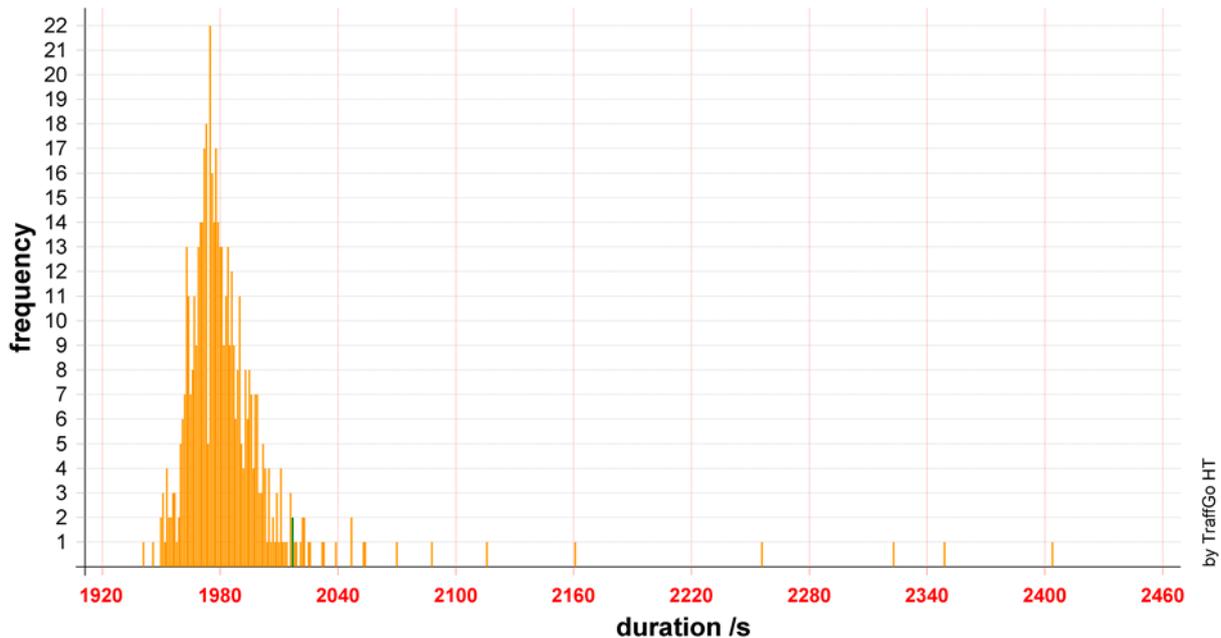


Fig. 1: Duration distributions of an analysis with the significant run marked green.

6 Handling Passenger Surplus

Based on FP56/6 and SDC2/14/2, Annex 1, 6.9 was added. Especially in the day case scenarios, the surplus of passengers in certain assembly stations can be significant, so an exchange of passengers between the assembly stations should be documented or analyzed.

7 Test Case

In the German building industry, documenting the fundamental diagram of the model used has become standard procedure, since this diagram visualizes a key feature of the models realism. That is why Test 12 has been added to Annex 3, Appendix 2.

8 Other Points

FSS Code, Chpt. 13, 2.1.2.2.2.1 Case 2 seems to be misleading. It says: "members of the crew in public spaces occupied to 1/3 of the maximum capacity". It maybe should be changed to "1/3 of the crew should be distributed in public spaces", since the idea is probably not, to fill public spaces to 1/3 of their capacity with crew.