

April 2, 1947

TO: E. F. Smith  
FROM: R. H. Grace  
SUBJECT: M/22-1002

This memorandum refers to the problem discussed in the meeting of 5/12/47, regarding the response of the M/22 safety in heat treatment. The following steps have been taken on this problem:

1. Quantity of material, approximately 1000 pieces, was prepared.

2. The material was placed in a heat treatment furnace at the temperature of 1000°F. The material was held at this temperature for 1 hour and then cooled.

3. The material was then placed in a straightening operation.

4. The material was then placed in a heat treatment furnace at the temperature of 1000°F. The material was held at this temperature for 1 hour and then cooled.

The total spread in position of this arm after heat treatment was found to be .023". It was noted that the general trend was for the arm to increase in height .002 to .003".

In view of the above, it appears that there are two possible solutions to the problem.

1. Reduce the spread in position of this arm prior to heat treatment.
2. Insert a straightening operation after heat treatment prior to assembly.

R. H. Grace  
Engineering Section  
Technical Department