Sept. 9, 1958 B. HANSSON ET AL 2,851,557

PROTECTING DEVICE FOR POWER CONDENSERS

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Fig.1

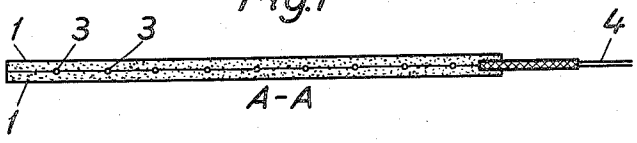
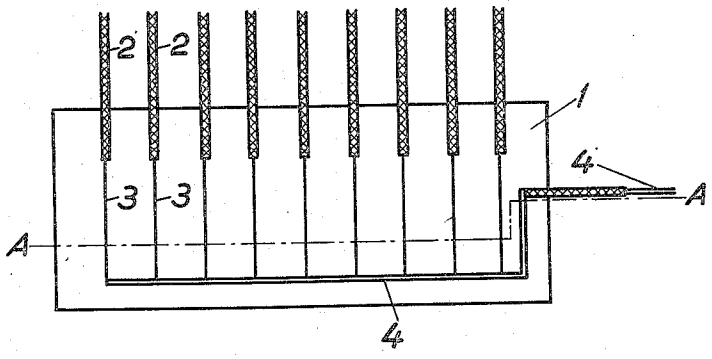


Fig.2



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PROTECTING DEVICE FOR POWER CONDENSERS

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3 Claims. (Cl. 200—125)

Power condensers generally consist of a plurality of condenser elements or condenser rolls which are enclosed in a common liquid container and connected to terminals common for all of them. In order to limit the effect of short circuits which may be caused by faults in the insulating layers of the condensers, fuses have been inserted in the connections between the elements and the common terminals. These fuse wires have either been surrounded by small paper pipes or been inserted in the condenser elements. In both cases it may happen that the arc appearing when a fuse wire is molten can damage an adjacent fuse or an adjacent condenser element.

The present invention concerns an arrangement in power condensers consisting of a plurality of condenser elements with fuses for the different elements in which the different fuse wires are enclosed and effectively separated from each other so that the arc appearing when a fuse wire is molten cannot have any damaging effect on fuses or condenser elements in the neighbourhood or damage the insulating liquid in the condenser container. According to the invention all fuse wires are impressed in a block of insulating material, for instance asbestos, pulp or paper impregnated with some synthetic resin. One end of the connections between the condenser elements and the fuses as well as one end of the common terminals are also impressed in said block.

The invention is of special importance in condensers insulated by means of a chlorinated insulating liquid, for instance chlorinated difenyl, because by the invention it is ensured that the arc formed at the fuses has no opportunity to disintegrate the said liquid and thus develop hydrochloric acid, which, if formed and distributed in the condenser, could decrease its dielectric strength. According to the invention therefore the porous material enclosing the fuses may be impregnated with some material preventing it from taking up the insulating liquid for the condenser, for instance some synthetic resin, or the porous material can be mixed up with some material which effectively combines with the liberated hydrochloric acid.

The fuse block according to the invention may for instance be manufactured so that the connections and fuse wires are inserted between two plates of porous material, which then are pressed together, and a binder may then be inserted between them. The porous material may be impregnated with some synthetic resin, which after the compression of the material is baked. The porous material may be porous paper, pulp or plates of asbestos or some material of that kind.

Fig. 1 shows a cross sectional view taken along line A—A of Fig. 2 and;

Fig. 2 shows the connections made at the fuses of the composite fuse block.

The accompanying drawing shows a fuse block according to the invention. On the drawing 1 designates two thin plates of paper pulp and 2 the connections to the condenser elements, 3 the fuse wires and 4 the terminal common to all condenser elements.

We claim as our invention:

1. A multipolar fuse block for an electric power condenser, comprising a strip of insulating material, a plurality of fuse wires embedded in said strip and serving as individual and separate fuses arranged at a sufficiently insulating distance from each other, connections located in said strip and individually projecting outwardly therefrom and all connected individually each to one end of one of said fuse wires, and a terminal connected to the opposite ends of said fuse wires and also projecting outwardly from said strip.

2. A multipolar fuse block according to claim 1, in which the said insulating strip is formed of porous material impregnated with a synthetic resin.

3. A multipolar fuse block, according to claim 1, in which the said insulating material is formed by a pair of thin plates of insulating material tightly joined to each other and said fuse wires being entirely interposed between said plates.

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