SUBSTITUTES FOR ASBESTOS BEARING THERMAL INSULATION MATERIALS

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Good afternoon gentlemen.

The subject of my brief talk is "Substitutes for Asbestos Bearing Thermal Insulation Materials".

I say brief because the very unique and accommodating physical and thermal characteristics of asbestos make it very difficult to replace.

As asbestos is used in thermal insulations, as a fibrous binder, a filler, or a woven textile, we ask it to withstand very high temperatures, very high rates of change of temperature or thermal shock, and to resist chemical attack. We also say it must be compatible with the only high temperature adhesive we know of, sodium silicate. All of these conditions which asbestos meets so well are not met by any one of the potential substitutes for the asbestos fiber. Plant or animal fibers, polymeric fibers, and glass type fibers all fail in at least one of the required characteristics.

In thermal insulation systems our current areas of concern are the high temperature calcium silicate type basic insulations, and the woven asbestos or "A" cloths.

The asbestos-free calcium silicate situation is presently very dim with not much hope for the near future. The main reason for this is that the two largest manufacturers of calcium silicate

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