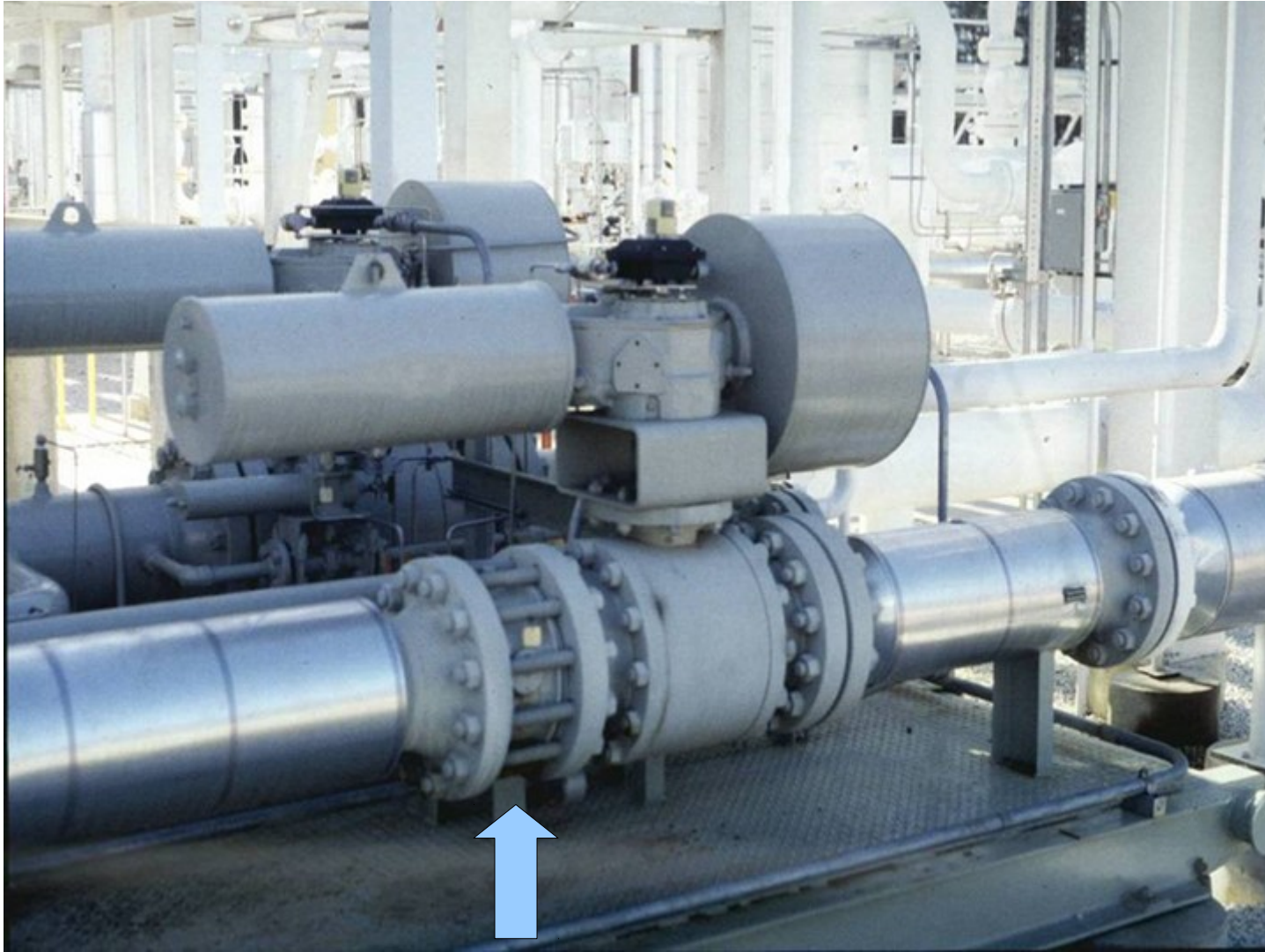


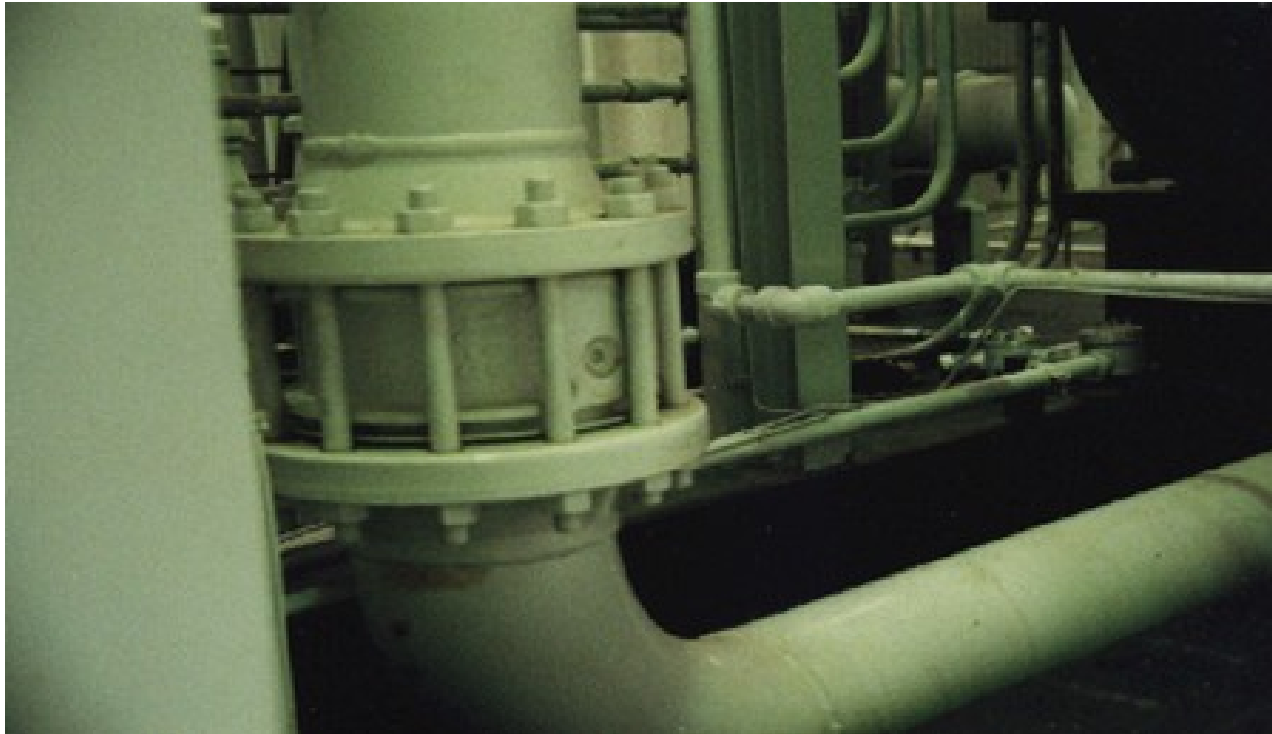


Long  
Bolts

# Long Bolt Usage



# Usage



Could be a butterfly valve ...

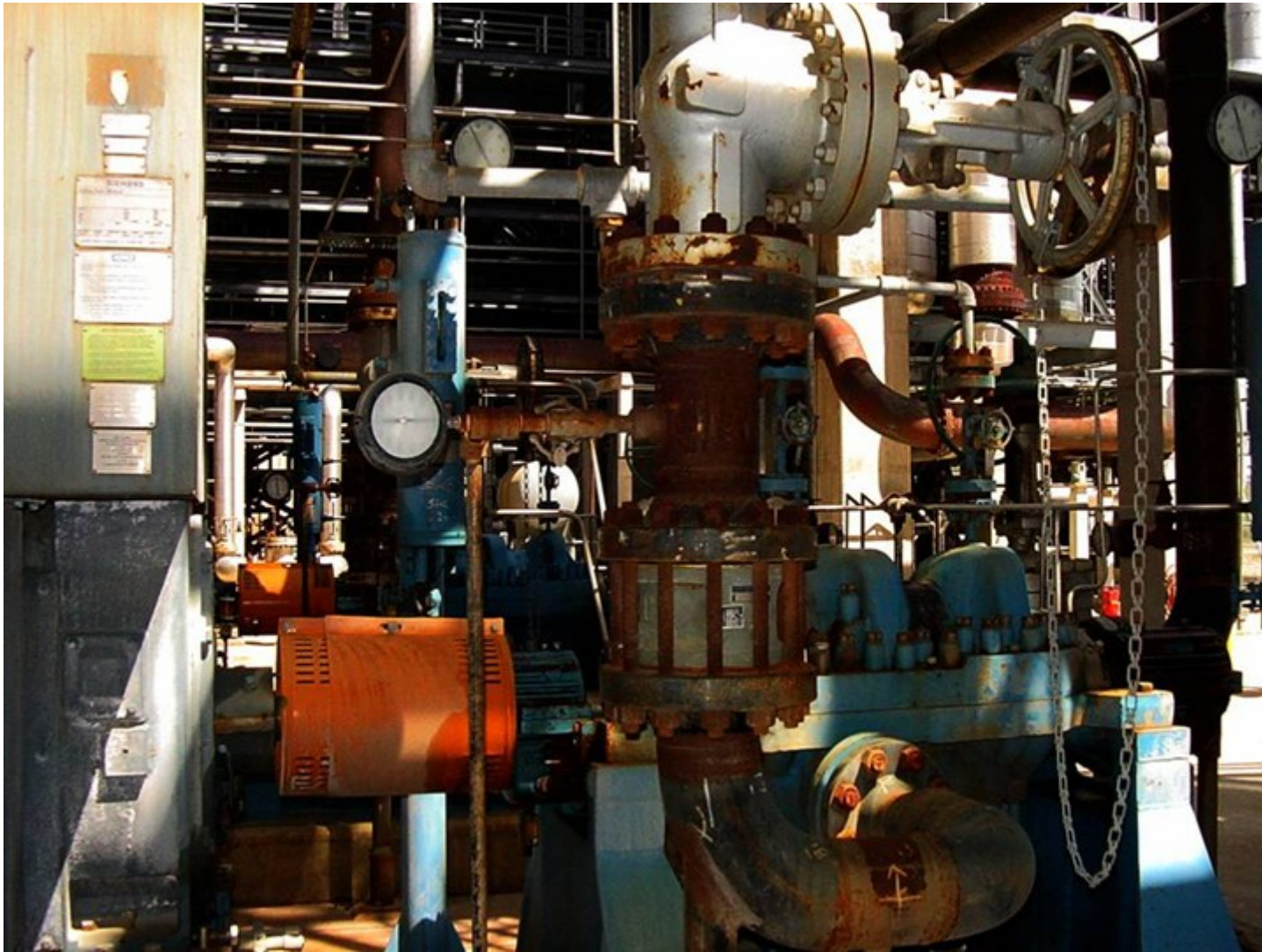


# During HAZOP



A local fire might be considered ...

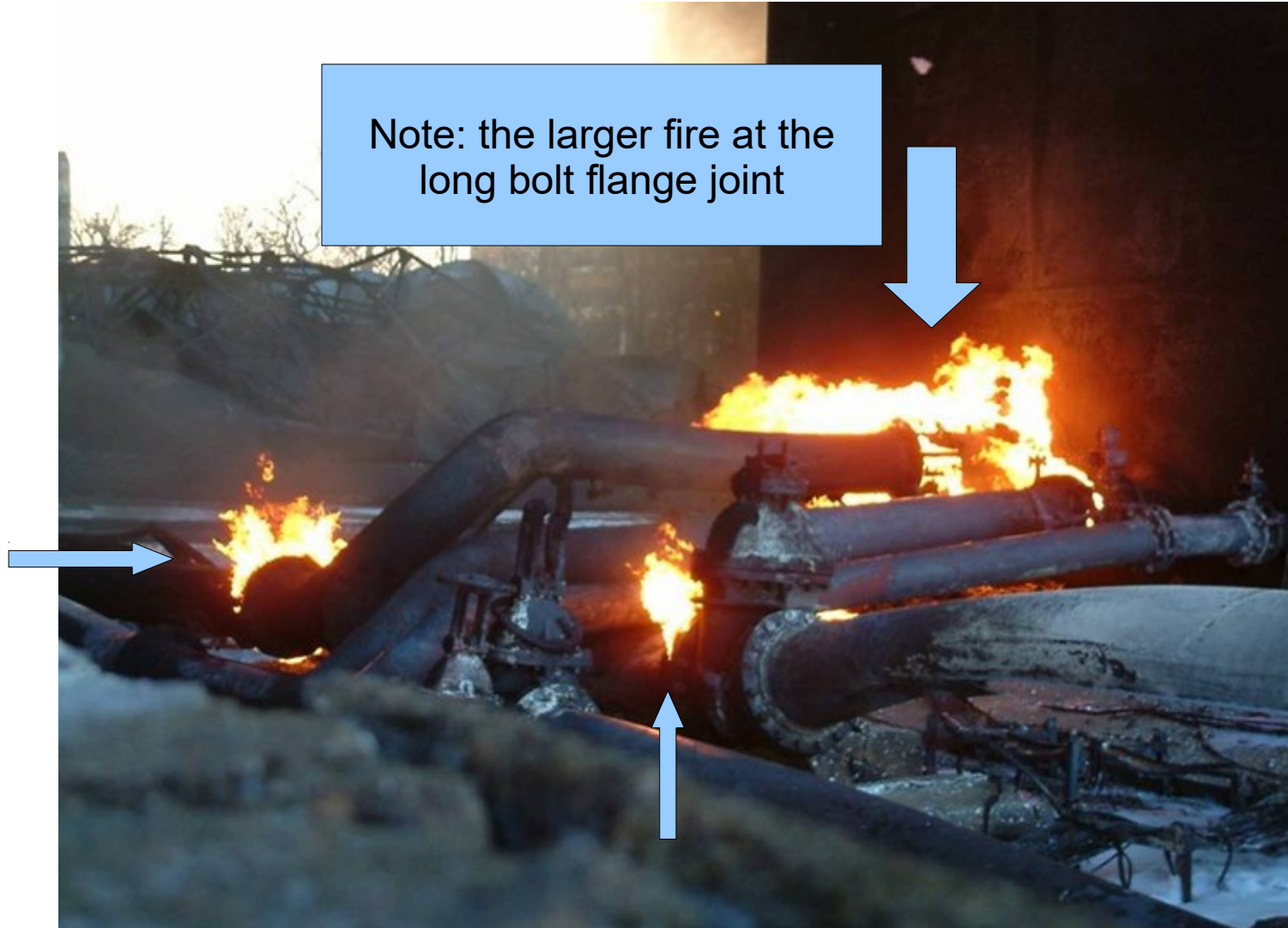
# Effect



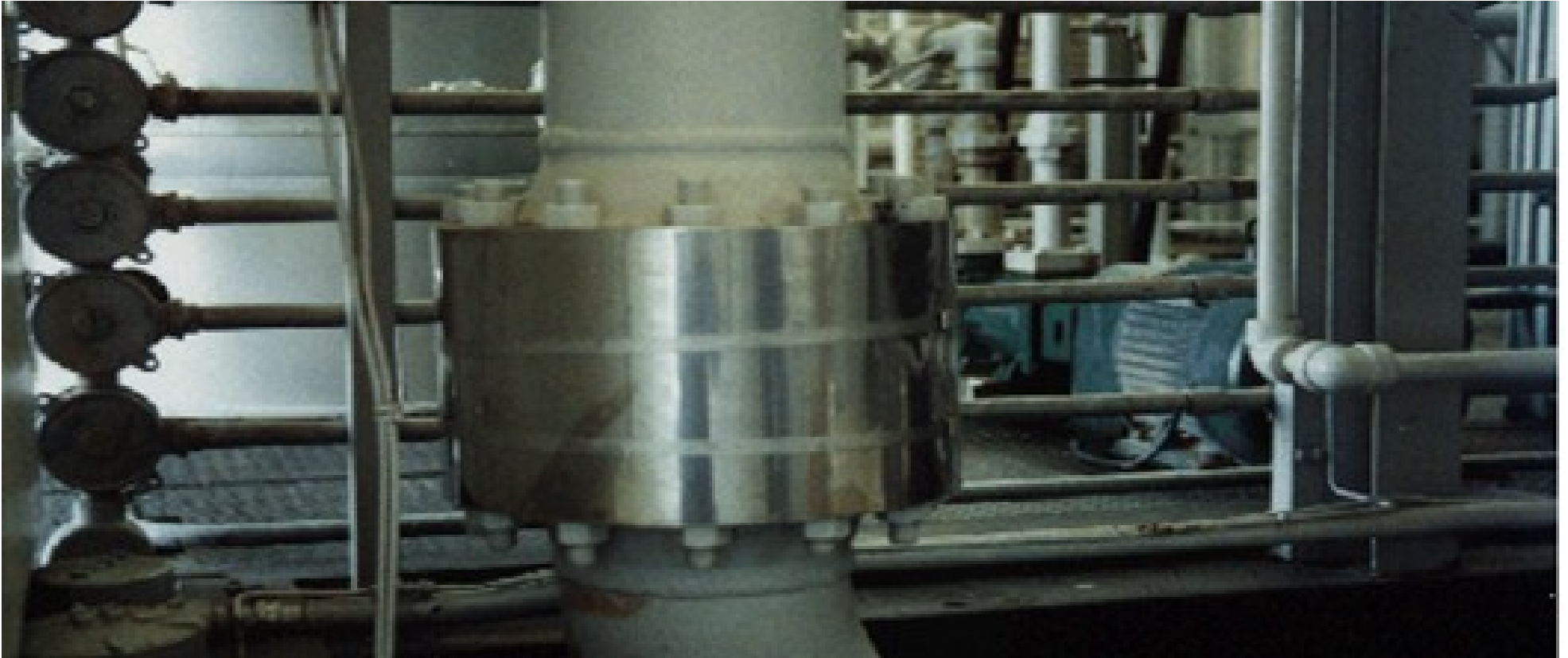
What will be the effect on long bolts?



# Thermal Expansion



# Possible Solution



# Possible Solution cont'd

