⑦ Hydrogen Recombiners

Recombiner

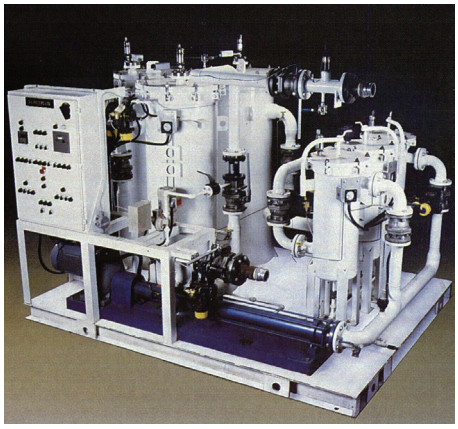
Hydrogen is released into the nuclear plant containment area under LOCA conditions. In the longer term under normal operation, radiolysis and corrosion can also increase hydrogen levels to the extent that a potentially explosive mixture of hydrogen and air could be present. To mitigate hydrogen concentration, passive catalytic recombiners are installed in the containment. Recombiners use a catalyst made of porous material treated with metals such as platinum and palladium. The catalyst provides sites where hydrogen and oxygen atoms from air come into close vicinity and chemically react to form water, thus reducing hydrogen concentration.

⑧ Restrictive Orifices & Flow Elements

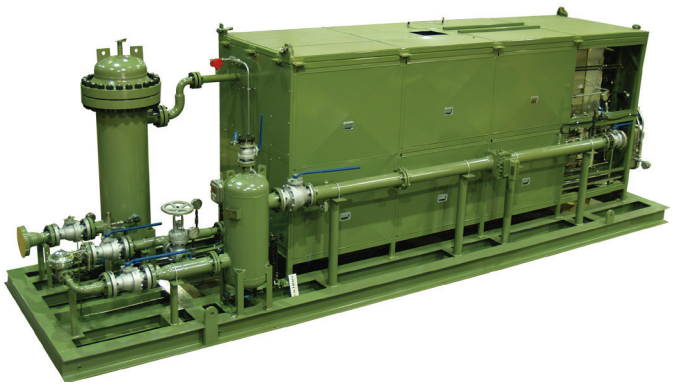
Restrictive Orifices and Flow Elements

There are many orifices used in a nuclear plant. Their main purpose is to reduce downstream pressure. Flow Elements are designed for precise measurement of flow to within 1% accuracy. Accuracy deteriorates due to corrosion and abrasion of precisely machined bores and profile. Therefore non corrosive material which is abrasion resistant is used.

⑨ Separators

Oil Water Separators

Drain water is usually contaminated with hydrocarbon oils from machine oil leakage. Prior to disposal drain water should be stripped of oil and contaminants. Oil Water Separator removes hydrocarbon oils and suspended contaminants. These units include pre filters and coalescers. A metered acid/base injection system can be incorporated for pH control if desired.

⑩ Fuel Gas Conditioning Systems

Fuel Gas Conditioning Systems

Fuel Gas Conditioning Systems are used to process natural gas fuel for the auxiliary power supply turbines. Turbines require fuel gas which is dry and at temperatures above its dew point. Cleaning is accomplished through the use of filters and coalescers which remove suspended particles and moisture. Heating to above dew point is done to avoid formation of hydrates. Electrical or Cata-Dyne™ heating is used. Pressure reduction is done to regulate pressure for the type of turbine.