

On New Concepts, Applied Design and Core Management against Earthquake in the Complex Chemical Plants

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The Earthquake has been occurring more frequently in Korean Peninsula, where adjoins the circum-pan, Pacific Earthquake Belt being subjected to many Earthquakes. In 2009, Earthquakes in Korean Peninsula were occurred 60 times compared with 41 times on yearly average of the last 10 years (1999~2008). And the Richter Magnitude (R.M.) records 6.9 on the maximum occurred in near DuMan River in Feb. 18, 2010. In their plants boundary, they have many kinds of processing equipment (P.E.) that are very high, huge and heavy. So, the stronger Earthquakes than 5.2 of R.M. in Mt. Sokri, 1978, will destroy these P.E. Then, these P.E. will be fallen down, and hazardous materials will be leaked out and diffused. In the result, a great many people will be sacrificed; both neighboring county and city will be fallen into ruins. In general, according to the priority order, it is necessary to reinforce these P.E. on the Earthquake-design standards to be separately prepared by every plant. And upgrading of operation strategies are required to minimize total damages in the complex. Accordingly, this paper shows what and how to protect and develop the processing equipment against Earthquakes.