

정보저장기기와 생물학적 정보저장 매커니즘 비교

이승엽* · 김경호* · 양우성* (서강대학교 기계공학과),
박영필** (연세대학교 기계공학과)

Information Storage Devices and Biological Mechanism of Information Storage

Seung-Yop Lee, Kyung-Ho Kim, Woosung Yang and Youngphil Park

Key Words : 정보저장기기, 생물학적 정보, DNA, 뇌, MEMS, Nano Device, 지적 설계, 탄소나노튜브

Abstract : Current information storage devices, such as HDD, CD/DVD-ROM/RW, probe-based memory and carbon nano tubes, are compared with biological information storage mechanisms in DNA and brain memory. Various biological components in living cells are analyzed based on "irreducible complexity" of intelligent design concept. Linear and arel density of information stored in the biological and mechanical storages are compared for the applications and developments of new storage devices.

화력발전소 발전기 냉각용 수소배관계 과도진동 개선

양경현† (한전전력연구원) · 김성휘* · 조철환** · 배춘희*** (한전전력연구원)

Reduction of Transient Vibration on H₂ Piping System for Generator Cooling in a Power Plant

Yang Kyeong Hyeon, Kim Sung Hwi, Cho Chul Whan, Bae Chun Hee

Key Words : Power Plant(화력발전소), H₂ Piping System(수소 배관계), support(배관지지)

Abstract : There was the transient vibration on H₂ piping system for cooling the generator in a power plant. We found it was resulted from resonance between the natural vibration of the piping system and exciting force from the turbine rotor by measurement and simulation test. We verified it would be changed the mode shape of the piping system by several simulation test for the structural modification of the piping system. Therefore we concluded that the change of mode depends on deeply changing path of pipe, modified support position and condition.