

סמינריון

הנדך מוזמן/ת להרצאה סמינריונית של הפקולטה להנדסת מכונות, שתתקיים ביום ד' 16.12.15 (ד' בטבת, תשע"ו), בבניין דן-קאהן, קומה 0, באודיטוריום 1 בשעה 13:00.

תרצה: מיכל לוי

מנחה: פרופ' יצחק עציון
מנחה שותף: ד"ר יורי קליגרמן

על הנושא:

Contact Mechanics of Elastomeric O-Ring with Time

להלן תקציר ההרצאה:

Elastomeric O-rings are widely used in hydraulic and pneumatic equipments to ensure the sealing between a moving piston and stationary cylinder. During assembly the O-Ring is squeezed between the inner wall of the cylinder and the piston. In some cases the system is stored for a long time before operation. A plane strain numerical model was developed to simulate the problem. A normal displacement was applied to one of the walls compressing the O-ring (squeeze), followed by a dwell time during which the structure stays in a strained condition and stress relaxation takes place. Thereafter, tangential displacement is applied to one of the walls, which further increases the strains in the O-ring. The purpose of this research is to study the effect of O-ring squeeze, dwell time, piston tangential displacement and O-ring mechanical properties on contact parameters such as contact area and stress distributions.

בברכה,

פרופ' ז'א אא יר א'ת
מרכז הסמינרים