

Finding topic sentences and key words, Passage reading and translation [1-8]

References:

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3. Öniz A.S. and Cross T.M. (1981)"Physical Science Reader Series" Volume I, Middle East Technical University Ankara, Turkey.
4. Glendinning E. and Mantell H., (1983), "Write Ideas", Longman Group Limited
5. Shreve N.R., Brink J. A. Jr. (1977),"Chemical Process Industries, Mc Graw-Hill, London
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Complete the sentences with the words in the list. Use each word only once.

(by run range explosion exploit already beyond solution release nuclear)

“Nuclear power has often been presented as the only means of ‘saving’ our standard of living when the fossil fuels like oil, coal and gas **run** out. It is attractive in that we have **already** developed the technology to **exploit** the energy stored in the atom. In addition, small amounts of fuel **release** enormous amounts of energy. However the problems of **nuclear** power have become increasingly clear in the last decade. These **range** from the threat of pollution to the danger of an accidental **explosion** and these make nuclear power a less desirable **solution** to the energy crisis. Furthermore, to completely replace fossil fuels **by** nuclear power would require the construction of about fifty times the present number of nuclear power stations by the end of the century, which is **beyond** our resources.”

[1-2]

[1-2]

Eric Glendinning and Helen Mantell, Write Ideas ,Longman Group Limited 1983



Risk management essentially deals with the problems of uncertainty which affect most of the variables in reliability and cost evaluations. In harbor construction projects, the main problem is the accurate planning of the construction including risk factors. The primary risk factor is the failure probability of breakwaters during the construction stage. This probability is evaluated by using a reliability model, which is based on the failure mechanism described by Van der Meer Equations [7]. In the model, the risk of unacceptable structural performance and the inherent variability present in the description of the failure mechanism of armor layers, are quantified via the employment of an uncertainty analysis.

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[14]

Balas C.E., Hapoğlu H. (1995)
"The Risk Management of Breakwaters: a Case Study of Finike Yacht Harbor",
ACTES Proceedings, Cite's Marines Ocean Cities '95, Monaco, 317-320

Dalgakıranlarda Risk Yönetimi: Finike Yat Limanı İçin Bir Örnek Çalışma (The Risk Management of Breakwaters: A Case Study of Finike Yacht Harbor)

Maliyet ve güvenilirlik değerlendirmelerinde kullanılan değişkenlerin çoğunu etkileyen belirsizlik problemleri risk yönetimi ile ilgilidir. Liman inşaat projelerindeki temel sorun, risk faktörlerini de içeren hatasız bir planlanma yapmaktır. Projelerdeki temel risk faktörü, dalgakıranın inşaat aşamasındaki yıkılma olasılığıdır. Bu olasılık, Van der Meer denklemleriyle ifade edilen ve yıkılma mekanizmasını temel alan bir güvenilirlik modeli kullanılarak değerlendirilmektedir. Güvenilirlik modelinde, kabul edilemeyen yapısal etkinliğin riski ve koruma tabakalarının yıkılma mekanizmasının içinde var olan değişkenlik, belirsizlik analizi kullanılarak hesaplanmaktadır.

Bazı Kelimelerin Türkçe Tercümeleri

risk management	:	risk yönetimi
cost evaluation	:	maliyet
inherent variability	:	içinde var olan değişkenlik
failure mechanism of armor layers	:	koruma tabakalarının yıkılma mekanizması

«

The design of effective digital controllers depends highly on how well the dynamics of the controlled process are known. Such strong reliance on a process model constitutes a serious weakness of a control design technique because quite often the processes are not well understood, their physical and chemical parameters are not well known. In such cases the models that are found on basic principles are really inadequate to describe the dynamic characteristics of really processes, such as packed distillation column and cooling jacketed well batch mixing reactor.

Furthermore, even if a good initial model for a controlled process is exist, effective control during a long operation may not be achieved, because of two reasons. First, most of the chemical processes are nonlinear systems and as a result the characteristics of the corresponding linearized systems change depending on the operating point which the linearization is applied. Second, dynamic characteristics of chemical processes change with time because several of their physical and chemical parameters values vary with time. Therefore modifying the process identification technique are very essential.

In this work, system identification for the packed distillation column and the cooling jacketed well mix batch reactor which are currently operating in Ankara, Turkiye, is successfully achieved by utilizing modified Bierman (1976) algorithm. The models obtained are compared with dynamic experimental profiles. It is found that the result are very satisfactory.

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Karacan S., Cabbar Y., Hapoğlu H., Alpbaş M. (1996)
"System Identification for Chemical Processes"
12th International Congress of Chemical and Process Engineering CHISA'96,
Praha, Czech Republic, ISBN 80-02-01106-6, 1444, P9.20

Kimyasal Prosesler için Sistem Tanımlama (System Identification for Chemical Processes)

Etkili sayısal kontrol edicilerin tasarımı, büyük ölçüde kontrol edilen prosesin dinamiğinin ne kadar iyi bilindiğine bağlıdır. Proses modeline böylesine bağımlı olma kontrol edici tasarımının zayıf bir noktasını teşkil etmektedir. Çünkü prosesler genellikle yeterince iyi anlaşılammakta, kimyasal ve fiziksel parametreleri yeteri kadar iyi bilinmemektedir. Böyle durumlarda temel prensipler üzerine kurulu modeller, soğutma ceketli iyi karıştırmalı kesikli reaktör ve dolgulu distilasyon kolonları gibi gerçek proseslerin dinamik özelliklerini açıklamakta yetersiz kalmaktadır.

Ayrıca kontrol edilen proses için önceden belirlenen iyi bir model olsa bile, iki nedenden dolayı bu prosesin uzun süreli çalıştırılması esnasında verimli bir kontrol sağlanamayabilir. İlk olarak kimyasal prosesler çoğunluğu yapı itibariyle doğrusal olmayan sistemlerdir ve bunun sonucu olarak doğrusallaştırılmış eşdeğer sistemlerin özellikleri doğrusallaştırmanın uygulandığı prosesin çalışma noktasına bağlı olarak değişmektedir. İkinci olarak bu proseslerin fiziksel ve kimyasal parametrelerinin değerleri değiştiğinden ilgili sistemlerin dinamik özellikleride zamanla değişmektedir. Bu sebeple, proses tanımlama tekniklerini geliştirmek son derece gereklidir.

Bu çalışmada, halen Ankara'da çalıştırılmakta olan soğutma ceketli iyi karıştırmalı kesikli reaktör ve dolgulu distilasyon kolonunun sistem tanımlaması Bierman algoritması kullanılarak başarıyla gerçekleştirilmiştir. Elde edilen modeller dinamik deneysel profillerle karşılaştırılmış ve sonuçların uygun olduğu görülmüştür.

Bazı Kelimelerin Türkçe Tercümesi

a good initial model

:

önceden belirlenen model

Rewrite the sentences below with the correct word order to make the phrases

The sun source of is of our the original most energy.

The sun is the original source of most of our energy.

Engineers solvers are the of our materialistic problem society.

Engineers are the problem solvers of our materialistic society.

Computers our lives in have enhanced ways before never conceived.

Computers have enhanced our lives in ways never before conceived.

Complete the sentences with the words in the list.

Now scientists are developing two new types of concrete containing polymers. Builders can obtain these two types of polymer concrete by means of two different methods. In one method, builders replace the cement in concrete with polymers.

Complete the sentences with the words in the list.

1. We are able to change energy from one form to another for three main purposes – to provide heat, light, and power for machines. For instance, we can burn wood and the fossil fuels and in this way change their chemical energy into heat energy. We can also change this heat energy into electrical energy (i.e., electricity). We can use different forms of energy, such as electrical energy and heat energy, to run machines and thus obtain mechanical energy.

Rewrite the sentences below with the correct word order to make the phrases

The limiting availability factor in freshwater seems of to be the oxygen.

The limiting factor in freshwater seems to be the availability of oxygen.

Computers made the drawing of drawings by plans much simpler have than hand.

Computers have made the drawing of plans much simpler than drawings by hand.

There safety problems of and are cost.

There are problems of safety and cost.

Ordinary concrete polymer concrete is different grey in colour but can be colours.

Ordinary concrete is grey in colour but polymer concrete can be different colours.

We is not a have to the that nuclear power complete answer energy shown problem.

We have shown that nuclear power is not a complete answer to the energy problem.

Most look for in a four-year employers graduates specific degree field.

Most employers look for four-year degree graduates in a specific field.

We we can change its use energy destroy and form, but cannot energy.

We can use energy and change its form, but we cannot destroy energy.