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ENGLISH TITLES

AGRICULTURE SCIENCES

Effect of irrigation intervals and nitrogen fertilization on growth and yield of two maize hybrids

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Abstract

Two field experiments were carried out at the Research Farm of the Faculty of Agriculture, Assiut University, during 2008 and 2009 seasons, to study the effect of three irrigation intervals (15, 25 and 35 days) and three nitrogen fertilization rates (40, 80 and 120 kg/fed.) on the growth and yield of two maize hybrids (S.C. Watania 4 and T.W.C. 310). Increasing irrigation intervals significantly reduces maize growth and yield and its components as well as the percentage of protein and oil in grains. This reduction in grain yield (76.28 and 63.07%) is due to irrigation every 35 days compared to irrigation every 15 days for the first and second seasons respectively. The two hybrids significantly differed in most of growth characters in both seasons and grain yield and its components in the second one with superiority of S.C. Watani4. Increasing N-rates significantly increased the growth of maize and grain yield and its components as well as the percentage of protein and oil in grains. Interaction between irrigation intervals and N-rates significantly affected grain yield/fed. in the first season and that highest yield, when irrigation every 15 days and application of 120 kg N/fed.

Key words: irrigation intervals, maize hybrids, N-rates.

BIOLOGY

Digestive gland alterations in Bivalves (*Tivela ponderosa*) exposed to Mareb crude oil, dispersed oil with dispersant and dispersant (Histological study)

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Abstract

This study includes three laboratory experiments for studying toxicity effects of three test chemicals (Mareb crude oil, dispersed oil with dispersant and dispersant) on the tissue of digestive gland of bivalve (*Tivela ponderosa*).

Acute toxicity test was done by exposed bivalve *Tivela ponderosa* to the concentrations 5, 10, and 15 ml/l of test chemical (Mareb crude oil, dispersed oil with dispersant and dispersant) which was added to sea water (exposure time 96 hours). At chronic toxicity study, bivalve *Tivela ponderosa* was exposed to 0.5, 1.0, 1.5 ml/l of the same chemical toxicant which was added to sea water (exposure time 3 weeks).

Biomarkers was observed in the bivalve *Tivela ponderosa* when exposed to different concentrations of chemical toxicants. The study showed that only dispersant have a less effect than crude oil or a mixture of dispersed oil with dispersant. The histological changes in digestive gland tissues was proportional to the concentrations in both acute and chronic toxicity test. The digestive gland of bivalve in low concentration of both acute and chronic toxicity test showed expansion of lumen, and the epithelial cells became thinner in the tissue exposed to low concentration of the three test chemicals; and at medium concentrations the digestive gland showed increase in vacuoles and secretions, while at high concentrations more changes appeared, such as general degeneration, and the digestive gland became more vacuolated.

Key words: Acute toxicity, Chronic toxicity, Digestive gland, Mareb Crude oil, Dispersed Oil with Dispersant, Dispersant, Bivalves, *Tivela ponderosa*, Histological study.

CHEMISTRY

Assessment on hydroquinone levels in some skin lightening creams available in Aden markets, Yemen

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Abstract

Hydroquinone (HQ), a dihydroxylated benzene derivative, having the chemical formula $C_6H_4(OH)_2$. It is used in body care products for the rapetucaly as a topical agent for the treatment of certain skin conditions but only allowable at a very low concentration. The abuse of HQ will damage the skin and the sensitive area on the face. Due to this, many countries prohibited the use of HQ. Ten (10) samples of skin-lightening creams containing hydroquinone were randomly sampled based on consumer demand from the open market in Aden city, Yemen. The most of labels on the packages did not indicate the presence of hydroquinone. The creams were analyzed for total hydroquinone (by UV spectrophotometr) and pH values (by pH meter).The results indicate that the pH values in all the samples were found out permissible limits. The concentration of hydroquinone in the creams ranged from below 0.076 to 4.533%. Thirty percent (30%) of analyzed cream samples contained hydroquinone levels higher than the international limits, as WHO, EU and USFDA. The use of such creams may lead to health hazards. Therefore, it is recommended that all skin-lightening creams should be checked for hydroquinone levels before marketing.

Key words: Hydroquinone, Skin-lightening cosmetic, UV Spectrophotometry, pH values, Yemen

ENGINEERING

Study of cyclic heat treatment on Carbon Steel

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Abstract

In this work, an annealed Ck85 carbon steel was subjected to cyclic heat treatment process that consisted of repeated short-duration (3.4 minutes) holding at 8000C (above Ac3 temperature) followed by forced air cooling. After 8 cycles (about a total 1 hour and 10 minutes duration of heating and cooling cycles), the microstructure mostly contained fine ferrite grains (grain size of 7 μm) and spheroidized cementite. This microstructure possesses an excellent combination of strength and ductility. The disintegration of lamellae through dissolution of cementite at preferred sites of lamellar faults during short-duration holding above Ac3 temperature, and the generation of defects (lamellar faults) during non-equilibrium forced air cooling were the main reasons of accelerated spheroidization. The strength property initially increased, mainly, due to the presence of finer micro constituents (ferrite and pearlite) and thereafter marginally decreased with the elimination of lamellar pearlite and appearance of cementite spheroids in the microstructure. Accordingly, the fractured surface initially exhibited the regions of wavy lamellar fracture (pearlite regions) along with dimples (ferrite regions). By increasing number of heat treatment cycles, the regions of dimples gradually consumed the entire fractured surface.

Key words: Carbon steel, cyclic heat treatment, cementite dissolution, lamellar faults, accelerated spheroidization, mechanical properties.

ENVIRONMENT

Hydrographical studies on mangroves ecosystem of the Red Sea Coast of Yemen from Al-Salif to Bab-el-Mandeb strait

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Abstract

A study was conducted on Hydrographical Studies on Mangroves Ecosystem of the Red Sea Coast of Yemen from Al-Salif to Bab-el-Mandeb Strait, during the months of January, April, August and October, chosen to represent the four seasons of a full year 2013. Data on temperature, salinity and pH were obtained from the field. Dissolved oxygen was determined in the laboratory by Winkler method. Air temperature varied between (28.3 - 36.6) °C, with mean value 31.89°C; water temperature ranged between (27.3 - 35.6)°C with mean value 31.27 °C; salinity ranged between (42 - 54) ‰, with mean value 45.68 ‰; pH values ranged between (7.5 - 8.04), with the mean value 7.74 pH; dissolved oxygen values ranged between (3.2 - 8.2) mg /L, with the mean value 5.83 mg /L. This study is baseline data toward future ecological study, conservation and management of the resources of this economically important wetland in Red Sea Coast of Yemen.

Key words: Hydrographical Studies, Mangrove, Red Sea, Yemen.

MEDICINE

Cutaneous manifestations of diabetes mellitus among patients in Aden

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Abstract

This retrospective study was conducted on diabetic patients with skin lesions attending two private clinics in Aden, during the period January 2013 to December 2014.

Two hundred and nine diabetic patients, 123 (58.9%) females and 86 (41.1%) males, enrolled in this study. Their ages ranged from 12 to 88 years, with a mean age 54.7 ±

13.8 years. The majority of patients (91.8%) were with type II DM and 8.2% with type I DM. 50.2% of patients with type II DM were in the age group 41-60 years, while in type I DM patients of age < 40 years represents 5% ($p < 0.05$).

The duration of diabetes was < 5 years in 88 (42.1%) patients and 121 (57.9%) had diabetes > 5 years. The majority of patients 90.4% had single type of skin lesions and 9.6% had combination of two types of skin lesions.

The various types of skin lesions were: tinea pedis 44 (19.2%), pruritis 22 (9.6%), diabetic dermopathy 19 (8.3%), pyoderma 17 (7.5%), eczema 15 (6.6%) and the last four diseases were xanthoma (1.7%), necrobiosis lipoidica (1.3%), lipid dystrophy (1.3%) and psoriasis vulgaris 2 (0.9%).

We concluded that skin involvement occurs quite often in diabetic patients.

A need exist to provide information, education and communication to diabetic patients so as to increase their awareness.

Key words: Diabetes mellitus, cutaneous manifestations, private clinics, Aden

The dilemma of congestive heart failure among Yemeni patients presented with acute coronary syndrome

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Abstract

Acute Coronary Syndrome and its consequences is one of the most common cardiac diseases world-wide. Yet in Yemen; Gulf registry of acute coronary events (GULF RACE I) data are the first nation-wide information that highlight the magnitude of this problem. We would like to point out the problem of congestive heart failure among Yemeni Acute Coronary Syndrome population, its prognostic importance and impact in patients outcomes. Yemen data arm and was a part from the GULF RACE phase I.

Out of 1054 hospitalized with acute coronary syndrome, 181 patients (17.3%) had congestive heart failure on presenting to the hospital or during hospitalization itself. They were relatively older 63.2 ± 10.7 years ($P < 0.001$) with males predominance (72.4%). In spite of Anterior /Anteriolateral ST Elevation, Acute Myocardial

Infarction was a common feature of presentation (69.6%), still Left Bundle Branch Block Myocardial Infarction were more predominant. Echocardiographic feature was more consistent with congestive heart failure group, Left Ventricular Ejection Fraction was (40% Vs 51% P <0.001). Those patients were in co-morbid condition more than the rest of the group of acute coronary syndrome. Evidently they were less treated utilizing evidence based treatments. Congestive heart failure was linked to higher in hospital mortality (30.4 % Vs 4.8% with P < 0.001).

We concluded that acute coronary syndrome in Yemeni patients is complicated with congestive heart failure and had more worse prognosis regarding in-hospital morbidity and mortality.

Key words: Acute Coronary Syndrome, Congestive Heart Failure, Mortality, Yemen.

Surgical management of urogenital fistulae: Prospective study

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Abstract

The prpose of this study is to report the patient demographics surgical technique and outcome of urogenital fistulae repaired at our center. From January 2010 to April 2013, we received nine consecutivepatients complaining of urine incontinence after surgery for obstructed labor. All were evaluated by history, physical examination, intravenous urography, cystoscopy and speculum examination. All patients underwent surgical repair of the fistula(e) and followed up 3, 6 and 12 months postoperative.

Nine females aged 22-35 (mean 28) years with urogenital fistulae underwent open repair. The fistulae were vesicovaginal in seven and ureterovaginal in two. The surgical approach was transperitoneal in four, extraperitoneal in three and transvaginal in two patients.

The average hospital stay was nine days rang (5-14) all patient were cured from incontinence except one patient with missed second fistula not discovered until post operative period .

At follow up all cured patients remained dry with good bladder capacity.

In conclusion with comprehensive knowledge and adherence to basic surgical technique, high cure rate of urogenital fistulae could be achieved in relatively low volume centers .

Key words: Urogenital fistula, VVF, incontinence.

PHARMACY

Rational use of antibiotics in the treatment of urinary tract infection in Aden city

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Abstract

The term urinary tract infection (UTI) refers to the presence of majority microbial pathogens in the urinary tract producing signs and symptoms of a disease. The diagnosis of bacterial UTI is usually performed by bacteriological methods of isolation and identification of bacterial strains in voided urine. In Yemen, and specially in Aden, there is a lack of information not only about the pattern of used antibiotics in the treatment of UTI but also the prescribing behavior of these drugs. This is a retrospective study performed by collecting data from 12 selected urology outpatient clinics in Aden city and analyzed by using the excel program. According to the obtained results most pathogen of the UTi was E-coli (79%) and the most used method for the identification of UTI were the routine test (66%) while only 24% were by culture method. Most prescriptions contained single antibiotic (83%) and the most prescribed antibiotics were Fluoroquinolones, Cephalosporins and others.

Key words: Urinary tract infection, E-coli, rational use of antibiotics, fluoroquinolones.

Drugs utilization and therapy outcome in patients with heart failure, Aden 2013

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Abstract

The study evaluated drug utilization in heart failure therapy among inpatients at Al-Gamhuoria Teaching Hospital, Aden, in 2013. This descriptive study was carried out among heart failure patients who were admitted at Al-Gamhoria Teaching Hospital, Aden, during the period April 30th to July 30th, 2013. After obtaining the verbal informed consent, the interviews have been done using a structured data collection form. It covered the patient's general characteristics such as age, gender, marital status, education level, residential area and income, characteristics about medical history (HF symptoms, type of the concomitant disease under treatment) and characteristics about medication history (type of drugs, number of medications, dose, frequency and side effects). The medical charts have been checked to verify the data. The study has included 40 heart failure patients; 33 (82,5%) of them were males and 7 (17.5 %) females. The mean age of the patients was 61.5 ± 10.3 (range 45 - 80) years. More than 79% (23/29) of the participants had low educational level and most of the participants came from Aden 67.5% followed by Abyan 22.5%. All admitted study patients (100%) showed the NYHA functional classical signs and symptoms of heart failure, including shortness of breath (dyspnea; 87.5 %), Fatigue (57.5%), and peripheral edema (72.5%). Almost half of the study HF patients (47.5%) were classified as NYHA functional class II. The mean age increases from 61 ± 4.5 in NYHA functional class II to 68 ± 11.3 years in NYHA functional class IV. 31.6 % of the patients (12 / 38) had more than 100 beats per minute. Treatment of the study sample revealed 62.5% improvement, while one third of the participant (37.5) did not show improvement. Ischemia, non-ischemic heart disease or both made 7.5%, 52.5% and 37.5% of the patients, respectively. The preponderance was for hypertension and diabetes mellitus. 36.1 % of the total main drugs classes for HF treatment were diuretics, including aldosterone antagonist, followed by drugs blocking renin angiotensin system (RAS, 28.7%). Beta-blockers including carvedilol and bisoprolol made only 5.7% of the total drugs used. Diuretics and drugs blocking renin angiotensin system are the most used, but limited practice of carvedilol and bisoprolol. Hypertension and diabetes are the major comorbidities among the patients

Key words: Carvedilol, Heart failure, Diuretics, drugs blocking renin angiotensin system

PHYSICS

Electrical and structural properties of ZnS thin film

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Abstract

Semiconducting Zinc sulphide (ZnS) thin film was deposited on glass substrate using chemical spray pyrolysis technique. The suitable deposition temperature was $400 \pm 3^\circ\text{C}$, and the thickness of the films was found to be $420 \pm 5\text{nm}$. The X-ray diffraction (XRD) analysis showed that the film was polycrystalline with grain size of crystallite 16 nm. The electrical properties were studied for prepared film, and the results showed a linear behaviour of I-V characteristics at the voltage range of 30 -100 V. Resistivity of ZnS sample decreases with temperature, and found to be $9.91 \times 10^2 \Omega\text{cm}$ at room temperature while the conductivity was $1.01 \times 10^{-3} \Omega^{-1}\text{cm}^{-1}$. The activation energies were found to be temperature dependent and showed two values 0.21(eV) for temperature range (293-453)K and 0.233(eV) for temperature range (463-513)K. Hall coefficient (R_H) was calculated, its value pointed that the films was n-type, and the carrier concentration was estimated as $4.21 \times 10^{13} \left(\frac{1}{\text{cm}^3}\right)$, while the mobility was $149 \left(\frac{\text{cm}^2}{\text{V.s}}\right)$.

Key words: Zinc sulphide (ZnS), thin film, electrical properties, structural properties.

Effect of doping and sintering temperature on the optical characterization of CdS films prepared by screen printing technique

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Abstract

Two sets of CdS films, doped and undoped films by screen printing technique, were prepared and investigated by UV-Visible spectrophotometer. The undoped as-printed films showed high transmittance (90%) and lower reflectance (10%), while the films sintered at 400 C and 600 C showed less transmittance (60%) and little increase in reflectance (20%), the band gap energy of these films have decreased from

2.44 eV to 2.35 eV with an increase in the sintering temperature. The Doped films showed (70%) transmittance and reflectance of (20%) and increase in the band gap energy up to 3.45 eV. These results nominates the CdS films to be used as n-type window layer in solar cells. Other optical constants like refractive index (n), extinction coefficient value (K) and dielectric values have been calculated.

Key words: CdS films, optical properties, screen printing.

Effect of birch wood flour on the density, water absorption, thickness swelling, and thermal conductivity of wood thermoplastic polyurethane composites

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Abstract

In this study, some of the important properties of experimentally manufactured wood thermoplastic polyurethane composites were determined. Specimen having 30%, 40%, 50%, and 60% wood flour were mixed with rigid polyurethane foam. Physical properties (density, water absorption, and thickness swelling) and thermal conductivity of wood–plastic composites (WPC) were investigated. Results indicated that the density of WPCs decreased by increasing wood flour content. The results also revealed that water absorption and thickness swelling of the composites increases with increasing the percentage of wood flour content. It was found that thermal conductivity of the composites slightly increased with the increasing of wood flour content. Experimental results of thermal conductivity were compared with a theoretical model (Maxwell – Garnett model), the errors associated with the above model, with respect to experimental ones, varies between 40% to 50%.

Key words: Wood polymer composite, Polyurethane, Water absorption, Thickness swelling, Thermal Conductivity.

Influence of wood flour on the mechanical properties of birch flour reinforced thermoplastic polyurethane composite

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Abstract

The focus of this study is to characterize the mechanical properties of a composition prepared from wood flour and thermoplastic Polyurethane at different ratios. Wood flour was mixed with polyurethane at 30%, 40%, 50%, and 60%. Mechanical properties of the composites have been measured in tension, compression, and impact tests. Analyses have shown an increase in tensile strength with increasing wood flour content up to 40%, then it decreases when the proportion of wood flour becomes 50% and 60%. Tensile modulus showed an increasing trend with the increase of fiber content up to 50%, then it drops slightly when the reinforcement ratio becomes 60%. Results of compression test showed that 40% reinforcement loading has the peak of compressive strength. High impact resistance was observed with 40% wood flour content. A significant decrease in impact resistance was observed when the wood flour content ratio exceeded 40%.

Key words: composites; mechanical properties, polyurethane, wood flour, polyol.

ARABIC TITLES

AGRICULTURE SCIENCES

Effect of nitrogen fertilization on some growth characters of long staple cotton (*Gossypium barbadense* L.)

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Abstract

A Field experiment was carried out at the experimental farm of El-kod Agricultural Research Station, Abyan Governorate, during 2010 and 2011 seasons. The study aimed at determining the influence of four levels of nitrogen fertilizer (No, N30, N60 and N90 kg / ha) in the form of urea 46% Non growth of long-staple cotton cultivar (Muallem 2000). The experiment included 4 treatment. The design of each experiment was RCBD with four replications was used. The area of each plot was 12 m².

The values of the first flower and the first boll opening were not affected significantly by nitrogen fertilization rates in both seasons; While the increase in the rates of nitrogen fertilization led to the significant increase in the following values: plant height, the height of the first sympodia, the number of monopodia and sympodia/ plant and leaf area in both seasons, has made treatment N90 highest values, and the least up to the values were planted when the control treatment in both seasons

Nitrogen fertilizer reflected significantly linear regression correlation to increase plant height, the number of sympodia/plant and leaf area in both seasons, in addition to positive significant correlation with plant height, sympodia/plant and leaf area.

Key words: Nitrogen fertilization, Cotton, Southern Coastal Plain of Abyan.

The effect of different doses of nitrogen, phosphorus and potassium on growth, yield and quality of *Carica papaya* L.

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Abstract

Field experiment was carried out on private orchard at El – Khamella ,Abyan Governorate, during two consecutive growing seasons 2013-2014, to study the effect of different doses of nitrogen , phosphorus and potassium on growth and yield of papaya cv. Honey dew .

Nitrogen fertilizer was applied with three levels 50, 100, 150 gm N\plant, phosphorus with three levels: 50, 150, 250 gm P₂O₅\plant, and potassium with three levels: 100, 200, 300 gm K₂O\plant.

Randomized complete block design with 10 treatments and three replicates were used.

Results indicated that best yield was with 150, 250, 300 gm\plant N, P ,K different levels of fertilization has affected other characteristics: an increase in plant height, stem diameter and fruit weight; an increase in fruit number per plant with 100, 250, 200 gm\plant N,P,K and pulp thickness with 150 , 250 , 300 gm\ plant N,P K. Juice of fruits contains a high total soluble solid with 100 , 250 , 300 gm\ plant N,P K, and acidity was affected with different levels of fertilization.

Key words: papaya, Honey dew, fertilization.

Evaluation of some maize cultivars at different levels of plant density

Mohammed Ali Hassan , Ali El-Sayed Hamed and Ameen Mohammed Ali

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Abstract

A field experiment was carried out at the Farm of Nasser's Fac. of Agric. Sci., during 2011/2012 and 2012/2013 seasons, to study some growth , physiological and productivity characters of three maize cultivars (Kneja-36, City Lagoos 7931 and Tehama-1) at different levels of plant density (56000, 67000 and 83000 plant/hectare). The results of combined analysis of the data of the two seasons indicated that plant densities significantly affected a number of green leaves/plant, leaf area index at 45 and 60 days from planting date, plant height, stem diameter, net assimilation rate, relative growth rate, crop growth rate and yield components ear length, number of grains/row, 100-grain weight, number of ears/plant and grain weight ear, except a number of rows /ear , shelling percentage and grain yield / hectare. Plant height and leaf area index were significantly increased by increasing plant density, while the other previous characters were significantly increased by decreasing plant density, but grain yield was not significantly affected by plant densities. Cultivars showed significant differences in all characters under study, except a number of ears/plant and grain yield/hectare. Interaction between cultivars and plant densities significantly affected grain yield/hectare and the highest yield was at 83000 plant density for City Lagoos 7931 cultivar (4.95 ton/ hectare) and was at 67000 plant density for Kneja-36 cultivar (5.15 ton/hectare), while it was at 56000 plant density for Tehama-1 cultivar. (5.30 ton/ hectare)

Key words: cultivars, maize, plant density, physiological characters, productivity characters.

CHEMISTRY

Finding out the quantity and quality of Chitin and Chitosan in Harika cartilage :A comparative study

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Abstract

The aim of this study is to conduct an analytical, physical and chemical study to measure the quantity and quality of Chitin and Chitosan in the Hariqa cartilage and to compare them with Chitin and Chitosan extracted from the squid cartilage. For this purpose, an amount of cartilages of Hariqa and squid was collected on EbenMajed fishing boat, during September and October of 2008, in Mahyfif district in Almahrah governorate. This process of extraction of substances from Harika and squid cartilages as well as the comparing led to the following results:

- The quantity of the extracted raw substance from the squid cartilage that is subjected to examination = 50130 grams
- The quantity of the extracted raw substance from the Harika cartilage that is subjected to examination = 25002 grams

The results of the extraction process are as follows:

- The extracted quantity of Chitin from the squid cartilage = 2406 grams (4.8%).
- The extracted quantity of Chitin from the Harika cartilage = 443 grams (1.8%). The percentage of Chitosan content in Chitin = (76.14%) and the quantity of the extracted Chitosan from the Harika cartilage = 342 grams, whereas the percentage of Chitosan content in the Chitin = (77.2%).

The viscosity factor for the substances, which is a chief indicator for the quality of the substance, is:

- For the solution of squid Chitosan = 44,11mm²/c
- For the solution of Harika Chitosan = 111,44mm²/c

Key words: Squid, Harika, Chitin, Chitosan .

ENGINEERING

Designing of classic control system to drive a bridge cranes

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Abstract

Automatic control has a key role in the progress of modern engineering and science, in addition to the great importance in the operation of space and missile guidance and aeronautics ships. Automatic control applications, has become an important and integral part of various industries and engineering equipment such as Bridge crane which is one of the important industrial applications used in carrying cargo from one place to another, thus serving the production processes in factories as installation of industrial equipment. Bridge cranes are used for unloading and loading in warehouses, and are considered as a key element in the mechanization of integrated production processes. So, this kind of cranes has been widely deployed, especially for high loads. Therefore, the importance of knowing the behavior of this type of cranes becomes important in installation phase before real install and investment through the study of vibration loads to reduce as much as possible, by choosing the appropriate speed, the impact of the movement of the dynamic forces on the structure and motion of the crane parts. So we need to design control system to adjust the dynamic behavior, of bridge cranes and damping the load vibration using control theory to have desirable output according to standard specification.

Key words: Mathematic Modeling, Bridge crane Model, load vibration, Tuning PID controller.

The quality of internal environment for the drawing halls at the "Arch. Engg. Dept. as a Case Study" Faculty of Engineering - University of Aden

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Abstract

Many scientific researches and applied studies have sought to discuss and study the concept of the internal environment quality of educational spaces in terms of all the requirements in general, but here; we will examine, in particular, the internal environment quality in the drawing halls in one of the most important faculties of the University of Aden and the most important department, the Department of Architectural Engineering and through the most important elements; Education in which an education spaces (Drawing Halls), which is the objective of this study is to answer the questions arising "Has the new building complex of the faculty of engineering Achieved indoor environmental quality in the drawing halls?", and "Has Has this Also led to the rationalization of the use of electric power?"

In this Paper we will study the methodology and discussion of the background theory of the elements of the internal environment of the drawing halls and its impact on human behavior. Also the quality of education will be discussed trough the religious, moral and material references, analysis of the elements of the environment through modern and contemporary vision in order to achieve the quality of education (Local and International). An Empirical Study of the role of building materials construction "Outer and Inner Building Envelope" and its thermal performance in the process of heat transfer from the tuition spaces, the impact on their equipment and using electrical energy devices during the year, has lead to rationalize the consumption of electric power. Theoretically, a questioner was designed to investigate the opinions and ideas on the concept of environmental quality, impact and obstacles and their impact on the rationalization of electricity consumption, and was distributed to graduate students (fifth level students) and Junior Lecturers, professors and specialists in Architecture.

Key words: Internal Environment, Drawing Halls, Energy Conservation, Thermal Performance, Environmental Quality.