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| **جامعة القاهرة – كلية الهندسة إدارة الدراسات العليا والبحوث** | **F:\ENG.A.HARIDY\AHMED HARIDY-W\ACADEMIC STUDIES\MASTER THESE- DESIGN OF MINI PLANT\POWER POINT\06-12-2014 progrss meeting\center logo.jpg** | **مـركـز**  **الدراسات والبحوث التعدينية** |
| **محاضرة عامة عن رسالة**  **ماجستير في تكنولوجيا البترول والغاز الطبيعي**  **للمهندس/ احمد محمود كامل حبيب** | | |
| **تاريخ المحاضرة:** السبت **الموافق:** 2/ 4/ 2016 **الساعة:** الثانية عشر ظهرا | | |
| **مكان المحاضرة:** ملحق كلية الهندسة - مبنى تعدين - الدور الرابع - مـركـز الدراسات والبحوث التعدينية | | |
| **التخصص:** ماجستير بيني في تكنولوجيا البترول والغاز الطبيعي | | |
| **عنوان البحث: استخلاص مكونات البوتاجاز والمتكثفات من الكميات القليلة من الغاز الطبيعى الغنى بها: التصميم الأمثل لوحدة نزع الغازات الحمضية**  **Mini Plant for LPG and Condensate Recovery from Small Amounts of Rich Natural Gas: Optimum Design of Sweetening Package** | | |
| **المشروفون**: ا.د/ السيد أحمد الطيب (أستاذ هندسة البترول – كلية الهندسة – جامعة القاهرة)  د/ تامر سمير أحمد (أستاذ مساعد بقسم الهندسة الكيميائية – كلية الهندسة – جامعة القاهرة)  م/ شريف حسن هدارة (وزير البترول الأسبق) | | |
| **نبذة عن البحث:**  **Abstract**  Associated gas flaring is one of the most challenging energy and environmental problems facing the world today. Approximately 150 billion cubic meters of natural gas are flared in the world each year, representing an enormous waste of natural resources and contributing 400 million metric tons of CO2 equivalent global greenhouse gas emissions.  Due to the presence of dispersed oil fields that produce small amounts of associated gas and as these fields are located far away from any existing processing plants it is not feasible to process these small gas quantities. Therefore, the only way for handling these small quantities of associated gas is to send them to the flare without any processing. Meanwhile, Egypt suffers a shortage in natural gas liquids (NGL) especially LPG for domestic use because of the limited gas amounts and the lean composition of most of the discoveries. Consequently, it has always been a challenge facing the Egyptian petroleum sector to fulfill the domestic needs, and the only available way was importing LPG; around 60 % of the total domestic consumption is now imported to bridge the gap between demand and supply in Egypt.  From this perspective, the Faculty of Engineering at Cairo University represented in the Mining Studies and Research Center (MSRC) and Egyptian Natural Gas Company (GASCO) showed much interest in investigating this problem in an attempt to find a reliable solution. The present research work is a part of a research project that tends to study the technical and economical possibility of designing a mini-plant that can recover LPG and gas condensate from the small amounts of associated gas produced actually in the oil fields. This specific research will focus thoroughly on studying all available sweetening techniques. In addition, it will compare these techniques to determine the most suitable one(s) for handling small quantities of the flared rich associated gases. A complete design of the sweetening units is created on the HYSYS simulation software and other devised calculation sheets. The design incorporates the following items: operating conditions, power requirements, energy requirements, unit sizing, exact effluent conditions, specifications, the unit total capital investment (TIC) and sensitivity analysis for the mini plant project. | | |
| **توقيع المشرفون:** | | |
| 1. **مدير المركز:** **ا.د/ السيد أحمد الطيب التوقيع:** 2. **المشرف العام على برنامج الدراسات العليا الموجه لقطاع البترول: ا.د/ السيد أحمد الطيب التوقيع:** | | |
| **وكيل الكلية لشئون الدراسات العليا والبحوث التاريخ: التوقيع:** | | |