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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/ أحمد هريدي عبدالحميد هريدي** | | |
| **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 التبريد**  **Mini Plant for LPG and Condensate Recovery from Small Amounts of Rich Natural Gas: Optimum Design of Refrigeration Package** | | |
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| **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 Belayim Petroleum Company 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 on thoroughly studying all refrigeration techniques and comparing between them to determine the most suitable technique(s) for handling small quantities of the flared rich associated gases. Complete design of the refrigeration package is created on the HYSYS simulation software and calculation sheets, including the operating conditions, power requirements, energy requirements, unit sizing, exact effluent conditions, specifications, and the unit capital and operating cost. | | |
| **توقيع المشرفون:** | | |
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| **وكيل الكلية لشئون الدراسات العليا والبحوث التاريخ: التوقيع:** | | |