



INSTITUTE OF POWER ENGINEERS OTTAWA-GATINEAU BRANCH

IPE Wednesday October 28 2015 – General Membership Meeting

Shawn Giroux and Gordon Inkpen ; both district sales managers of Grundfos Pumps , gave a presentation on energy efficient pumps . They gave everyone at the meeting four handouts . These would be “ Overview of ECM Technology “ , “ Energy Efficient Grundfos CR Solutions “ , “ Hidden Opportunity for Energy Savings “ and “ Demand more than a pump “ . It is also possible to go to google chrome . We can google “ Grundfos “ or www.Grundfos.ca or www.Grundfos.com and then select a more specific search for energy saving pumps .

Electronically Commutated Motor Technology (ECM Technology) is based on a brushless DC permanent magnet design that is inherently more efficient than the shaded – pole and permanent - split – capacitor (PSC) motors commonly found in air handlers , furnaces , heat pumps , air conditioners and refrigeration applications throughout the HVACR industry . By combining electronic controls with brushless DC motors , ECM’s can maintain efficiency across a wide range of operating speeds . The GE ECM™ motor is a brushless DC , three – phase motor with a permanent magnet rotor . Motor phases are sequentially energized by the electronic control , powered from a single phase supply . These motors are actually made of two components , a motor control (control module) and a motor (motor module) . A single phase 120 or 240 VAC 60 (hertz/frequency) power is connected to the motor control . The motor control converts AC power to DC power . The microprocessor in the motor control is programmed to then convert DC power (by means of electronic controls) to a three phase signal to drive the motor and also to control the frequency (rpm’s) and the amount of torque (current/power) it delivers to the motor . The motor (motor module) is essentially a three phase motor with a permanent magnet rotor which contributes to the electrical efficiency of the ECM and also to its sensor-less ability to control the rpm and commutation (when to alternate the cycle) . ECM Technology is something like 55% more efficient the (PSC) motors Technology .

The presenters mentioned that 40% of the world electrical consumption is in motors and 10% is in pumps . In many cases , more than half the energy consumed by a pump system can be saved . Grundfos’ experience with pump audits so far has proven that an energy savings of 30% to 90% can be achieved in any type of building . This improvement in energy efficiency means that the pumps and motors do the same work as before but use less energy . Using less energy means that the electrical bill is substantially reduced and the impact on the environment is also reduced . The presenters mentioned that their MAGNA3 is a circulator pump . The MAGNA3 is easy to install and it comes with a ECM motor and the pump continuously monitors the flow rate to ensure the desired maximum flow is not exceeded . MAGNA3 is supplied with wireless technology which enables it to connect to another MAGNA3 pump . The two pumps are now controlled jointly in either cascade mode , alternating mode or pump back – up mode . The MAGNA3 has a built – in heat energy meter . This would be a good pump system for a full range (perfect fit and low life cycle costs) ; best efficiency in the market ; high intelligence ; proven reliability ; and easy installation . The presenters gave some examples of 80% to 90% efficiency

improvement in places like Dalhousie Agricultural College (Truro Nova Scotia) ; Bedford Institute of Oceanography ; Timber Creek Property Management in Halifax ; and some more examples . The presentation also had a question and answer involvement and the presentation ended at about 8:15 PM .

After the presentation our IPE Branch Meeting got started . There were 14 members and guests in attendance at the meeting although the presenters left Louis' Steak House soon after their presentation was over . Copies of the minutes of the previous meeting of our Branch (June 17 2015) were distributed to the members present after the presenters were gone . Each member reviewed the minutes of the previous meeting . Jeff Clark made the motion to adopt the previous minutes and Mike Noonan seconded the motion . The motion carried and the minutes were adopted . In business arising from these minutes we noticed that a planned Tour of a Microbrewery did not take place sometime in May 2015 . We promised to try again and have a Tour of a Microbrewery sometime in 2016 .

Gilles Leclair mentioned to everyone that he had the " White Paper " on the Symposium of the Industrial Application of Gas Turbines (IAGT) Committee Banff Alberta Canada October 2015 . Gilles promised to send a copy of this " White Paper " to everyone who was at the meeting except for the presenters . He did this the next day after the meeting .

Allan Whetter gave an update to the members present about the IPE . Since our Treasurer was not present ; Allan mentioned our Branch Bank Balance is \$3646.93 from September 30 2015 . We need to collect \$400.00 from a person from the golf Tournament and \$200.00 and \$100.00 from two job advertisements . We gave \$385.00 as a donation to CHEO . Allan mentioned that now the National Directors of the IPE have monthly conference calls whereby they could inform members (by email) of progress on items they were discussing . The first of two items that were discussed was the renewal dues for 2016 will be increased five dollars to \$110.00 if paid after 30 days and \$100.00 per year if paid before 30 days . This increase was recommended by the Directors and approved by the members at the AGM . The Directors thought that the additional revenue would go towards offsetting costs of hiring a marketing consultant to advise how best to promote the IPE and increase the visibility and prominence of the IPE . With the increased visibility and prominence , membership should increase and the IPE can be a stronger voice for power engineers and provide better service to our members . The second item discussed was the 2016 National Officers : National President – Ralph Klopff of Toronto Branch ; First Vice – President - Blair Saulnier, PE, of Nova Scotia Branch ; Second Vice – President - Tom Phillips of Winnipeg Branch ; Past President - Eric Steinson , PE, of Vancouver Branch ; National Secretary - Fred Billard of Nova Scotia Branch ; and Assistant National Secretary - Allan Whetter of Ottawa Branch . These monthly conference calls should keep the members more up to date on the IPE business because the AGM is only once a year . Gilles Leclair is the new Provisional Director .

The National IPE is looking at changing to a new website platform that would serve the membership across the whole country better. From the Ontario Area Representative meeting on October 24 2015 , Gilles Leclair mentioned a memorandum of understanding IPEEC and the IPE . Gilles mentioned that 500 plants are now involved with college programs . Allan Whetter let us know that we already have sopec exams which are standard across the country for acquiring our Poer Engineering Certificates . Proposed regulation changes include standardizing plant ratings across the country and standardizing plant regulations across Canada . Gilles Leclair let us know that the next gathering of colleges would be at Confederation College in Thunder Bay sometime in May 2016 . As far as we know the next AGM will take place in Toronto in 2016 . This AGM may be combined with the Educational Forum to take place on October 21 – 22 2016 . Allan Whetter also informed the members present about a Plant Tour to take Place at Ottawa

University starting at 6:30 PM on Wednesday November 18th 2015 . The Beginning of this Plant Tour would be a short meeting to have our Branch Executive Elections for 2016 take place . We would meet at a nearby restaurant for supper at 6 PM before the Plant Tour . We also have a reservation for 25 people for Thursday December 10th 2015 for our Branch Christmas Party at 7 PM at Milestone's Restaurant on Pinecrest Road near IKEA .

The meeting adjourned at 9:25 PM .

Zbyszek Slojewski
Secretary
Institute of Power Engineers
Ottawa-Gatineau Branch