

**Inter-Provincial Power Engineering Curriculum Committee Meeting  
Calgary, Alberta  
Minutes for June 6<sup>th</sup> and 7<sup>th</sup>, 2005**

**Chair: Garry White**  
**Vice Chair: John Cerniuk**  
**Recording Secretary – Ellen Flynn, PanGlobal**

**Attendees:**

**Annis, Paul** – Technical Standards & Safety Authority (TSSA)  
**Arnold, Jack W.** – National Institute for the Uniform Licensing of Power Engineering (NIULPE)  
**Bachelier, Bill** – Chief Boiler Inspector, Nunavut  
**Baker, Robert** – Cambrian College  
**Bechtel, Burke** – Medicine Hat College (MHC)  
**Best, Robert** – College of the North Atlantic (CONA)  
**Bishop, Malcolm** – British Columbia Safety Authority (BCSA)  
**Burkhard, David** – National Institute for the Uniform Licensing of Power Engineering (NIULPE)  
**Butler, Timothy L.** – National Institute for the Uniform Licensing of Power Engineering (NIULPE)  
**Cerniuk, John** – Greater Toronto Airports Authority  
**Chase, Lloyd** – Alberta Boiler & Safety Association (ABSA)  
**Clarke, Bob** – PanGlobal Training Systems Ltd. (PGTS)  
**Dandenault, Bob** – Manitoba Hydro  
**Dous, Brent** – PanGlobal Training Systems Ltd. (PGTS)  
**Ellis, Steven** – Holland College  
**Flanagan, Brian** – Portage College  
**Fleming, Doug** – Award Recipient  
**Golar, Fred** – British Columbia Safety Authority (BCSA)  
**Gosselink, John** – Saskatchewan Boiler & Pressure Vessel Safety  
**Gray, Warren** – Assiniboine Community College  
**Haberman, Walter** – Assiniboine Community College  
**Hammer, Richard** – Nova Scotia Community College (NSCC)  
**Hodgkinson, David** – Portage College  
**Hornibrook, Pat** – College of New Caledonia  
**Knibbs, Don** – International Union of Operating Engineers (I.U.O.E.)  
**Kolbuch, Ray** – Manitoba Dept. of Labour & Immigration  
**Kondruk, Mark** – TransAlta  
**Lea, Tom** – Portage College  
**Leming, Tom** – Alberta Boiler & Safety Association (ABSA)  
**Leonard, Yucca** – Emploi – Quebec  
**Leung, Arthur** – Dept. of Education, Government of Newfoundland  
**Litvinchuk, Bill** – Alberta Boiler & Safety Association (ABSA)  
**Lyons, Larry** – Portage College  
**McDowell, Kevin** – International Union of Operating Engineers (I.U.O.E.) – Local 865  
**Morancy, Ron** – Confederation College  
**Parker, Jeff** – PanGlobal Training Systems Ltd. (PGTS)  
**Peuramaki, Grant** – Northern Alberta Institute of Technology (NAIT)  
**Philip, Mike** – Power Engineering Training Services  
**Requena, Gilbert** – Northern Alberta Institute of Technology (NAIT)  
**Ross, Elizabeth** – Keyano College  
**Rossiter, Ray** – Institute of Power Engineers (IPE)  
**Sever, Larry** – Deer Creek Energy Ltd.  
**Shorthouse, Andy** – PanGlobal Training Systems Ltd. (PGTS)  
**Shupac, Ray** – Institute of Power Engineers (IPE) – Calgary Branch

**Siggers, John G.** – Nova Scotia Environment & Labour  
**Speiss, Robert** – Yukon Consumer and Safety Services  
**Stewart, Aden** – PanGlobal Training Systems Ltd. (PGTS)  
**Thornitt, Bob** – Northern Alberta Institute of Technology (NAIT)  
**Vernham, Tom** – Keyano College  
**Waddell, Terry** – Red River College  
**Welsh, Bill** – Saskatchewan Institute of Applied Science and Technology (SIAST)  
**White, Garry** – British Columbia Institute of Technology (BCIT)  
**Winchell, Dave** – National Institute for the Uniform Licensing of Power Engineering (NIULPE)

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### **1.0 Chairman, Garry White called the meeting to order at 9 am.**

### **2.0 Opening Remarks & Greetings**

Gord Nixon, SAIT's Vice President Academic welcomed all IPECC attendees to SAIT with a special welcome to the National Institute for the Uniform Licensing of Power Engineers (NIULPE) members from the United States. He stated that Power Engineering has been at SAIT for over 50 years. SAIT has now developed a partnership with NAIT and BCIT, which is called PanGlobal Training Systems to develop and update the Power Engineering Curriculum. We need to reflect on where industry has come from and where it's going. Due to the higher level of reported incidents in the US we need to look at the overall North American solution with standardized training for all operators. We have some concerns coming up with aging demographics and changing technology. There is also a need to look at enhancing the training standards and credentials for Boiler Operators. What this group is discussing is very important to the future of the Power Engineering profession.

Chairman, Garry White thanked SAIT Energy Department for hosting this event. He asked everyone to pass around the member list and provide updates.

### **3.0 Agenda approved with the following changes**

- Move # 3 to #4
- Move #4 to #3
- Move 9.1 to 11.1
- Aden will speak to #9 and 11.1

### **4.0 Identification of Voting Delegates (2 per jurisdiction)**

BC – Malcolm Bishop, Pat Hornibrook  
AB – Mark Kondruk, Elizabeth Ross  
SK – Bill Welsh, John Gosselink  
MN – Terry Waddell, Ray Kolbuch  
ON – Ron Morancy, John Cerniuk  
QB – Yucca Leonard  
NB –  
NS – Richard Hammer, John Siggers  
PE – Steven Ellis  
NF – Robert Best, Arthur Leung  
NU – Bill Bachellier  
YT – Robert Speiss  
NT -

### **5.0 Approval of 2004 Minutes**

Amendments to the minutes were presented as follows:

- New Brunswick delegates should be changed to Nova Scotia delegates
- New Brunswick delegate was Dale Ross
- Item 6 – Program Developer should be changed from Terry Waddell to Stan Bailey

- Item 10 – Delete the first reference to ACI referring to Quebec's membership and the next sentence should read ACI requests input from any representative. **Action:** John/Ellen - completed

**Motion to approve the minutes as amended was made by Gilbert Requena, Seconded by Terry Waddell, Carried.**

## 6.0 Business arising from minutes

- Translation on 4<sup>th</sup> class done in French - Agenda 11.3 will give update
- Any feedback from ACI or SOPEEC regarding standardization of regulations will be addressed under Tom Leming's report.
- Under #8, Degree program feedback – Garry White and Terry Waddell have not fully completed so the report will be forthcoming. Bob Clarke, PanGlobal and NIULPE met with Ferris State University. They are activating a full 4 year program and are in the process of creating a newly aligned Power Engineering Degree. They have an HVAC Degree and are pursuing an equivalent Power Engineering Degree with PanGlobal giving support. We would like a Bachelor of Applied Science Degree in Power Engineering. The idea of offering a degree is becoming more of a reality and many feel there should be a standing degree that is a Power Engineering Degree. Power Engineers are a stand alone profession with an educational path which is now approaching an applied degree. The syllabus really supports that it should be an applied degree. We would like to see this professional status in place in the next few years in Power Engineering rather than having to branch out to get degrees in other areas. **Action:** Garry/Terry
- John Siggers mentioned that the ASME Extract where pressure conversion Imperial to SI shows MPa but should be kPa. Also, page 27 on thickness calculation outside diameter measurement refers students on page 4 to another section that isn't there.

## 8.0 New Business

Tom Leming spoke regarding **4<sup>th</sup> Class Exams** - After reviewing old minutes and talking to instructors, the opinion came forward that maybe the new course has too much information to be covered in 2 papers so it may be time to go to 4 papers.

John Siggers agreed that material in 4<sup>th</sup> class is heavy and asked for input from group here as well as giving perspective from students and instructors. Comments and feedback are appreciated. It would not be a difficult thing to do to change the 4<sup>th</sup> class examinations.

Discussion:

- Burke Bechtel – would the number of questions increase? They could go to 100 questions on each paper but first need to see if people want to go this way and then will draft up a proposal. There is no regulation that specifies that a paper must be less than 150 questions. This could be done without a change of regulations. There are currently 150 questions and it could be changed to 75/paper. If changed to 150/paper it would be too demanding for the student.
- Bob Clarke asked if changing these exams would fit into the wide variety of programs that are represented all across Canada.
- Ron Morancy suggested we put this on the agenda for further discussion.
- Larry Sever suggested including safety but asked why the discussion on splitting papers if we are asking the same number of questions.
- Fred Golar advised the pass rate in most provinces is 80+% so it seems to be working the way it is and suggested that more information is needed before we make a change. No one was opposed to this.
- Ray Shupac mentioned that 4<sup>th</sup> class is divided into 15 sections and students complain that sometimes the exam is weighted on one particular section. Is there a need to look at a more composite method of extracting questions?

- John Siggers mentioned the SOPEEC web page on the SOPEEC website is directed by IPECC. Some updating is required which Garry White advised has been done and was updated just last week. This new paragraph included training providers and industry. If anyone has been missed they need to advise him.

## 7.0 Up-Date on International Certification Efforts - Bob Clarke

Panglobal is a separate company that is owned by SAIT, NAIT, BCIT and is a not for profit organization. It began in 1999 as a Joint Venture between SAIT and NAIT. Later when BCIT joined the agreement, the Board of PanGlobal suggested that they incorporate. We are developing training materials for the power engineering profession and are a support service for the power engineering training needs. We've been looking to a larger vision over the past couple of years. Back in 1911 started the first certification for Power Engineers in Canada. Power engineering training in Canada has quite a history which began here at SAIT in 1921 and was first delivered through a correspondence program.

Incidents across North America are reported on a **voluntary** basis to the National Board of Boilers & Pressure Vessels Inspectors. SOPEEC was formed in 1973. A Canadian standard for certification of operators has been in existence for about 32 years. In the United States only 7 states have licensure laws. Major cities have their own licensure laws which vary greatly. The lack of standard training across North America has a wide divergence.

If you take the number of facilities that have boilers in US - approximately 600,000 vs. 60,000 in Canada, it is about a 10 to 1 ratio in Canada vs. the US. The reported incidents are 60/1 ratio in United States vs. Canada.

The SOPEEC approved training materials in Canada which are metric have been fully converted to U.S. Imperial standard and have been approved from the NIULPE group as a standard for the United States. **Bob's overhead presentation given at the meeting is attached for your info – (PR#1).**

## Questions

- The ratio of accidents is a lot higher according to number of plants/personnel so is the reason due to lack of licensure and standardization? We did a government search of all Boiler facilities. The difference is that universal certification is mandatory in Canada but voluntary in the United States.
- Larry Sever asked if there is any value in combining the IPECC meetings with the National Pressure Equipment Conference held in February each year in Banff. There was discussion earlier on this last year that they would adopt a power engineering topic which is still in discussion. We will still encourage them to add power engineering topics to their conference. He stated that this group needs to network more with industry at a venue such as this. There was considerable discussion regarding aligning the IPECC/SOPEEC meetings with more industry attendees such as booths, speakers, etc. The IPECC meeting is held in conjunction with the SOPEEC meetings. One of the negatives aspects of holding some kind of power engineering trade show is that June is usually not a good time for the power engineering industry where it is an ideal time for educators due to being the end of the school year. The priority of IPECC is to provide recommendations and information on the training and curriculum standards. Suggestion made to email the "Steam News" to all IPECC members. Also Alberta is initiating discussions regarding having power engineers attend some of these meetings. There is also a need for some industry sponsorships. The IPE – national group usually meets in September so the June IPECC meetings work well for IPE.

## 8.1 Industry Presentation - Garry White introduced Mr. Bill Gwozd from ZIFF Energy

Bill Gwozd is a respected expert in Natural Gas Services and was once a SAIT instructor in the 1970's. He does about 100 presentations annually and each is usually one to two days. Ziff Energy sponsors three SAIT students to their annual main conference/seminar. Today's shortened presentation was provided "gratis" as a courtesy to SAIT and the Coordinator, Michael

Ouellet. ***Copy of slide presentation is attached (PR#2).*** The following are some of the stats presented by Mr. Gwozd:

- New pipeline from Alaska won't happen until 2014 or later.
- Lead time for new generation plants is more than 7 years.
- By 2025 about 80% of nuclear will be shutdown
- Alberta and Ontario consume more than 75% of all natural gas

Broke for lunch @ 12

Chair called the meeting to order @ 1pm and thanked SAIT for providing lunch.

### **10.0 PanGlobal Award Presentation**

This award will be presented each year at the IPECC meetings by the sponsor, PanGlobal Training Systems, the SOPEEC Chair and the IPECC Chair. The purpose of this award is to publicly acknowledge the efforts of a 4<sup>th</sup> Class Power Engineering student and the instructors whose combined perseverance enabled this achievement.

The eligibility criteria for this award are the following:

- Must be in a program supported by an approved educator (approval from the authority having jurisdiction).
- Must have the highest accumulated average (of all activities) as rated by the approved educator/training provider.
- Must have the highest average of SOPEEC exams.

Garry White and John Siggers presented a cheque for \$1,000 and award to Douglas Fleming who attended Northern Lights College in Ft. St. John, BC. Mr. Fleming's overall average was 92% for his academic marks along with 4<sup>th</sup> class certifying exam mark. Doug is looking forward to his employment with Duke Energy and riding his new mountain bike with his 2 dogs, Dexter and Otis.

***Attached is a letter from Mr. Fleming. (PR#3)***

### **9.0 4<sup>th</sup> Class Committee Report – Garry White**

Garry explained that the Power Engineering website is being consistently updated and all the revisions will be in place by September. There are significant revisions in the content of 4<sup>th</sup> class text as well with a 25-35% reduction in page count and efforts are progressing to present the learning materials in a more fundamental learning hierarchy.

***Please send comments on the 4<sup>th</sup> class to Garry as committee chair, to assist in the continued updating.*** **Action: Members/Garry** Formatting, editing won't be complete until February/06 at which time a draft will go out to Colleges. They will have until April 1<sup>st</sup>, 2006 to give feedback for final content. It will be in print for June 1<sup>st</sup>, 2006.

The hierarchy of learning and placing each subject matter in one section rather than scattered throughout the course should make it easier for educators. Also in the front of the manual directions will be inserted for the student on what chapters and sections to study for SOPEEC exams.

Discussion:

- Gilbert Requena was concerned on the impact on distance student with this change. It will be more of a challenge for them, however if the introduction is laid out well, it shouldn't impact too much. We need to make the transition to progressive learning.
- Tom Leming's opinion is that the learning materials are going to be even more accurate and make more sense as far as the SOPEEC exams. In many cases, courses are written this way and the exams guides tell you what to study for the exam. This is an improvement because of all the duplication in the old materials and the curriculum is not changing.
- Bob Clarke advised that we are responding to this particular need due to a request to follow this format in the 2<sup>nd</sup> class course.
- Aden Stewart stated a number of very qualified people have looked at this change and are very positive about the change. There will be no change to the test banks. We are shuffling material, not changing it and the objectives won't change. We will track any negative feedback we receive on these changes.

- Bob Clarke suggested that if the review committee has a structural change and recommendation, they will have to get feedback from Examiners fairly quickly.
- Burke Bechtel advised that the Colleges can't make changes after the budgets are in so if the new course is going to come out it will have to be presented to the Colleges 9 months prior so they have adequate time to change their notes.
- The general opinion is that this streamlining of the 4<sup>th</sup> class will neither affect how instructors teach nor how students learn.

**MOTION: To streamline the 4<sup>th</sup> class course to avoid repetition and duplication and to provide a detailed index outlining the changes by October 1, 2005 through email to the membership. Moved by Ray Shupac, Seconded John Gosselink. All in favour. Carried.**

Action: Members/Jeff/Aden

To advise PanGlobal of errors, you can email to [corrections@powerengineering.ca](mailto:corrections@powerengineering.ca). Jeff Parker and/or Aden Stewart will follow through with the corrections which will be fixed by adding a note to the text or advising through the website.

In reference to the codes – Jan 1<sup>st</sup>, 2006 is the target for all Code calculations to be in and will be on an eight year cycle. Discussion took place to do a five year cycle to coincide with the syllabus review.

**Motion: To form a subcommittee to look at the possibility of having a conference run concurrently with the IPECC/SOPPEEC Meetings made up of Power Engineering educators, union reps, IPE reps, industry members. Moved by Larry Sever, Seconded by Burke Bechtel. Voted – Opposed by majority. Motion denied.**

Everyone agreed that the National IPE group should take a look at discussing this idea in their September AGM instead of the IPECC/SOPEEC group. The purpose of this conference would be to give IPECC a higher profile so other groups understand the purpose and function of IPECC/SOPEEC. There are several Power Engineering conferences in the United States (Las Vegas and Orlando) however some attendees feel that there should be a similar conference held in Canada to promote better communication between the IPECC/SOPEEC group and industry.

John Siggers stated that IPECC/SOPEEC Meetings are a tradition and are held to determine curriculum and examination requirements for the industry. We rely on the college representatives having strong ties to industry in determining curriculum needs. There are budget considerations because Colleges host this event and if attendance increases significantly it may make it more difficult for some to host.

Broke for coffee @2:45. Resumed @ 3:15.

#### **9.1 Burke Bechtel/Aden Stewart – 5th class committee report.**

- Took ½ of the 4<sup>th</sup> class course and made it into 5<sup>th</sup> class course, following the intent of the syllabi.
- Henry Hau and Andy Shorthouse did the authoring on this project.
- Ray Kolbuch from Manitoba and Fred Golar from BC were assigned the job to keep people on track.
- Ray Shupac was a key person in helping to develop this as he brought all the information from the Fireman's course, Building Op B, etc. to put it all together.
- **An outline is attached for your review. (PR#4) Please give feedback/suggestions to Aden before October 1, 2005.** Any changes that come in after October 2<sup>nd</sup> won't be considered. The deadline for completion of this course is June 1, 2006. Action: Members/Aden
- Burke reviewed the complete outline in the meeting, which ended up being a 3 Section course. Any objectives that were greater than what the committee decided a 5<sup>th</sup> class operator needed to know were dropped.

- Tom Leming thanked the 5<sup>th</sup> class committee for their time donated to this project as it was a very well researched and detailed presentation.

### 11.2 Jeff Parker – 3<sup>rd</sup> class update

- No committee meeting due to being at mid-cycle point. 3<sup>rd</sup> class is in print, being used and every month some corrections have been received so errata is being compiled and put on the website with a few items still not on.
- Roy Stock went through all of the Code modules and updated all the modules from the old ASME Codes to the new ASME Codes.
- Translation Processes of converting all courseware into French has been a long process and now in the final stages. PanGlobal has been working with Quebec to make this available and to facilitate becoming involved again with SOPEEC/IPECC. The process involved using a translator in Quebec, and then material came to PanGlobal to working on the graphics and formatting to print and produce. We have required a technical editor here as well in Quebec. It has been reviewed and sent back for corrections. 4th class is complete. 3<sup>rd</sup> class nearing completion along with 1<sup>st</sup> and 2<sup>nd</sup>. All will be complete by June 2005 and available September 2005.
- Supplemental materials – will address this tomorrow in item 13.0. However some feedback is needed on Mollier charts – not needed for examinations but are required to demonstrate certain principles. **Action: Members/Jeff** The charts that currently exist have been degraded in quality so if we have to go back to ASHRAE we sometimes get very large charts that are difficult to reduce for use. Thus we need to know what is essential before we get copyright approval and produce them.

Garry White reminded everyone to confirm attendance with Michael Ouellet for the dinner Tuesday night.

**Motion: To adjourn for the day. Moved by Gilbert Requena and Seconded by Bill Welsh. All in favour. Carried**

### Tuesday June 7<sup>th</sup>

The Chair called the meeting to order at 9 am.

### 11.4 Instructor/Student Resources - Jeff Parker - *presentation attached. (PR#5)*

- Reviewed the online resources
- Working on links to specific sites for reference.
- Safety case study sites – go over real world examples
- Supplemental media – video, animations, (going through the animations and taking out the simplistic ones that don't add a lot of value)
- Course compass being replaced by self tests on the companion website
- Prior Learning Review
- Learning Activities
- Reviewed format that all material will be moved to. The margins will have ICONS indicating the companion resources. The companion website will be [www.powerengineering.ca](http://www.powerengineering.ca). It will be open for anyone right now and people can register free. The 4<sup>th</sup> and 3<sup>rd</sup> class will be completed the end of June. 2<sup>nd</sup> class will be loaded in also. With this it can be constantly and consistently updated whereas the CD's needed time and new CD's to be issued.
- The United States site will be [www.powerengineering.net](http://www.powerengineering.net)
- Errata and courseware updates will be sourced through this site.

- These sites will be open to students no matter what level they are at. A 4<sup>th</sup> Class student can look at the 3<sup>rd</sup> or 2<sup>nd</sup> class websites.
- In future editions, we are looking at integrating the workbooks and everything into the texts. We need feedback on whether this would be beneficial. **Action:** **Members/Jeff**
- At the 2<sup>nd</sup> and 1<sup>st</sup> class – students are more into self study so the answers will be at the back.
- There may be an instructor site that is password protected for instructors to be able to access diagrams, etc. for classroom instruction. Lesson plans can be shared on the site for other instructors use. We have already received input from instructors on their lesson plans to put on the site. The instructor site will be there for resources for instructors and to make the text easier to access. To access and get a password, instructors must email both: [jeff.parker@powerengineering.ca](mailto:jeff.parker@powerengineering.ca) and [aden.stewart@powerengineering.ca](mailto:aden.stewart@powerengineering.ca) to get set up. Feedback from the instructional staff would really be valuable on study materials and resources. **Action:** **Educators/Jeff/Aden** They advised that we need to get copyright from different sources to use these. We have got approval from Keenan and Keys, ASME, etc.
- Steam Tables
- Mollier Chart – is it necessary – can we put it as a download onsite.
- Psychometric Chart?
- R134A – received permission to add.
- Enthalpy Diagram – new ones from ASHRAE but what do we need?
- Interest Tables were in the 1<sup>st</sup> class at one time and maybe they need to be put back in.

#### **Feedback:**

- Mollier charts – Terry Waddell has 2 versions and one isn't complete. The larger chart would be good – 11x17.
- Pressure Enthalpy Diagram – only needs single page
- Mollier Chart - old one was an 11x17 foldout. Later it was reduced to 2 - 8 1/2 x11 pages. Suggest that maybe it should be segmented on separate pages, but may destroy how you use them.
- Enthalpy Chart – general opinion was that they aren't that important
- New Extract – is that the one that will be used on exam? Tom Leming will address this later.

Jeff suggested that we structure a new 3rd class subcommittee. This would aid in looking at some of the charts.

#### **11.5 1<sup>st</sup> and 2<sup>nd</sup> class update – Andy Shorthouse – *attachment of 1<sup>st</sup> class outline (PR#6)***

- **2<sup>nd</sup> Class** – last year about 90% complete and went to print in December 2004 was on sale the end of January 2005. There are 6 books in a binder. We need feedback and will eliminate the errors when reprinted as a coil bound product. **Action:** **Members/Andy** We had about 10 authors, which was a tough job to find. We had 3 or 4 other specialists to help out in the writing. The Power Engineers were very beneficial in the editing and also went to grammar editors. There are 57 modules in the 2<sup>nd</sup> class and 57 modules in the 1<sup>st</sup> class.
- **1<sup>st</sup> Class** – (the only power engineering course still remaining as a SAIT course until the new Power Engineering Training Systems (PanGlobal) one comes out) For anyone interested in seeing the outline for the 1<sup>st</sup> class course copies are available. We now have completed the 1<sup>st</sup> draft of all modules in the 1<sup>st</sup> class course which was completed so quickly because the authors we worked with on the 2<sup>nd</sup> class course now knew what we needed. We had 8 authors and the 1<sup>st</sup> class course was completed much more efficiently and economically than the 2<sup>nd</sup>. People in last year's June meetings were asked to review the 2<sup>nd</sup> class course for comments. Now we will ask people to review

the CD's for the 1<sup>st</sup> class course. They have been content edited, grammar edited and formatted. **Please give feedback to Andy Shorthouse or Heather Campbell by October.** Action: Members/Andy/Heather. The CD contains only sections 1, 2 and 5. If you wish to review a CD, please request one from Andy @ [andy.shorthouse@powerengineering.ca](mailto:andy.shorthouse@powerengineering.ca).

- There are only 5 of the 57 modules left to be edited by technical editors. There are 12 left for grammar editing. The technical edit is completed first and then the grammar edit.

#### Discussion:

- Mike Philips – Ontario has already used the 2<sup>nd</sup> class course and also run exams. They found the 3<sup>rd</sup> class were very good with all the examples and suggest that the 2<sup>nd</sup> class include more examples before the second printing. In the Safety Sections he suggests, in his opinion, that there is some inconsistency from the 3<sup>rd</sup> class to the 2<sup>nd</sup> class. Need to look again at the hierarchy of learning from the 4<sup>th</sup> to the 1<sup>st</sup> as to redundancy and repetition.
- Andy Shorthouse has noted that there is a bigger step from the 4<sup>th</sup> to the 3<sup>rd</sup> than to the 2<sup>nd</sup> and Power Engineering Training System will be looking at this with Roy Stock's help.
- Garry White commented that the 3<sup>rd</sup> class review committee deliberately raised the bar on the 3<sup>rd</sup> class. Wanted to make it easier to go from a 3<sup>rd</sup> to a 2<sup>nd</sup> because not enough people were progressing through to the 2<sup>nd</sup> and 1<sup>st</sup> class levels.
- Some of the authors we had were professional engineers and had to adjust to power engineering math because the focus is different. (theoretical versus practical)

#### 12.0 Examinations – Tom Leming - 11:05 - report *attached (PR#7)*

- PanGlobal Extract – 2006 at 1<sup>st</sup> class level do we want exam writers to bring in the books or will examiners provide the extract?

#### Year in Review –

- January 31, 2005 – no old 3<sup>rd</sup> class exams available anymore, but examinations under the old syllabus will be grandfathered.
- January 31, 2005 the revised 2<sup>nd</sup> class exam implementation commenced. – will be no grandfathering because of the content.
- PanGlobal revised 1<sup>st</sup> class will be on the shelves Jan.1, 2006 so new exams June 1, 2006.
- Working on revised 1<sup>st</sup> class questions banks
- When building the questions – not doing any questions that are any more than 5 marks maximum.
- There will still be a recommended reading list.
- 95% of the new questions are out of the new course. SOPEEC requested that Tom Leming write the questions with more parts rather than having any 20 mark questions. There shouldn't be more than 5-10% questions that aren't in the course. Also, if a person knows the course, they should know something about these questions.
- Have discussed with PanGlobal that since both the revised 2<sup>nd</sup> class has 2 or 3 modules on ASME Codes and the revised 1<sup>st</sup> will have 2 or 3 as well, then perhaps there is a need for a stand-alone book on the subject of ASME Code calculations.
- SOPEEC is always willing to look at college and training provider question banks and if the questions are quality in nature, they will incorporate some of them into the SOPEEC banks. Garry White of BCIT, Ron Morancy of Confederation College and Terry Waddell of Red River College have graciously offered to contribute their examination questions.
- Burke Bechtel – Going to 5 answer questions due to request from Ontario in 1993.

**Motion: “That SOPEEC to make the change of going from 5 answers to 4 on multiple choice questions.” Moved by Ron Morancy, Seconded by Richard Hammer.**

**The motion was withdrawn and a committee will be formed to look at the case studies on 4 and 5 answer multiple-choice questions.**

- 2005/6 – Matching the questions banks to the syllabus.
- ASME code calculations are a problem because of the time involved to answer these questions. Opinion is that it should be more heavily weighted to regulation side. SOPEEC will look at the banks. Most people don't take the full 3-1/2 hours to do the exams – only take about 2-1/2 hours.
- A2 Paper – couple of students didn't have time to complete their paper advised Terry Waddell.
- John Siggers – SOPEEC is standardized so what Ontario does should be the same as Alberta

Broke for lunch @12 noon

Resumed meeting @1:10pm

**Tom Leming** – spoke on the 4<sup>th</sup> class exams being a 2 paper or 4 paper exam 75-100 questions each)

**Comments –**

- Ray Shupac – The new 4<sup>th</sup> class course expanded years ago and included the Building Operator A material. At that time we didn't expand the exam and possibly should have.
- The 5<sup>th</sup> class subcommittee brought this forward because they decided that the 5<sup>th</sup> class material was too much material for 1 exam thus the 4<sup>th</sup> class exam possibly isn't covering enough material also.
- Bill Bachellier suggested that it may create problems for students not taking their courses at an institute. Industry needs to respond to this. There would be more cost for the companies as well as the people writing. Suggests that if we change to four papers that the number of questions should be increased to 100 each paper.

**MOTION: That IPECC requests SOPEEC consider changing the 4<sup>th</sup> class exam to a four paper exam from a two paper exam. Moved by Tom Leming, Seconded by Ron Morancy Vote – 6 in favour, 11 against – Motion defeated.**

**Re affirm Subcommittees for recommendations to take to next year's meetings–**

- Burke Bechtel will still chair the 5<sup>th</sup> class committee with members – Aden Stewart, Ray Shupac,
- Garry White will stand on the 4<sup>th</sup> class committee as chair – members Aden Stewart, Bob Thornitt, Tom Leming, Doug Fleming
- Rob Baker on 3<sup>rd</sup> class committee – members – Jeff Parker, Tom Vernham, Pat Hornibrook, David Hodgkinson
- 1<sup>st</sup> and 2<sup>nd</sup> class committee – Garry White (chair), Terry Waddell, Gilbert Requena, Paul Annis, Richard Hammer
- Four Figure Tables/Formula (handbook committee) – Paul Annis, Tom Leming, Grant Peuramaki (chair), Richard Hammer, Tom Vernham.

**13.0 Study materials, books & Codes – Committee**

No discussion

Availability of Betz Handbook is no longer in print and is still on the reading list but will be taken off. The new Nalco handbook will replace it. Check on their website and if you are going to switch over your water treatment to them or attend one of their seminars, they may give you a free text.

#### 14.0 Industry Reps View Points

**Ray Shupac, President of Calgary Branch of IPE** – Attending for the second time and have seen a lot of individuals who are very committed. Communications between different groups is needed to let other people in the power engineering field know what IPECC/SOPEEC is all about. We need to keep the students at the forefront of what we are doing. They are the foundation for the future. Communications relative to Power Engineering is very important. Communication Link is a small magazine that has started and would encourage everyone to get involved in writing for this magazine as well as reading it.

**Ray Rossiter, National Education, IPE** - Our organizations need to come together as much as possible. This is the fourth session attended and it's great getting to know people. It is definitely a positive step for the United States NIULPE organization to come and be a part of this communication.

**Bob Dandenault, Manitoba Hydro** – Agree with what Ray Shupac has said. Have to go back to the grass roots, the students and industry. Industry has little idea what goes into preparing the exams and the curriculum and this has been a good learning experience. It is really important to reach down to the people in the field and students. When IPECC advises change he would like to see a measurement telling whether the change is positive – i.e. the 4th class exams being split into 4 papers instead of 2 – The outcome of doing this wasn't expressed today. Doesn't hire 4<sup>th</sup> class people anymore, only 3<sup>rd</sup> so this exam change won't affect his worksite.

**Mark Kondruk, TransAlta** - sees a great bunch of people working together with commitment, doing a great job to take care of the industry. Advised IPECC/SOPEEC that they need to look forward to changes in the industry and will have to keep on their toes to prepare.

**Larry Sever, Deer Creek Energy** – see some gaps and problems that have to be addressed and agree with Ray Shupac that industry doesn't know what IPECC is or does. Thus better communication should be attempted with industry to attain a much higher profile with them. We are seeing a lack of 2<sup>nd</sup> and 1<sup>st</sup> class engineers so the industry will be in critical shape.

**Don Knibbs, International Union of Operating Engineers** – has been attending these meetings for over 18 years representing operating engineers and feels he truly represents that group. The majority are very pleased and very satisfied with the way the process is going. We are all pulling in the same direction and it's great to see that Ontario is now a part of the standardized regulations. There is an effort in the jurisdiction, but there are areas where the subject matter is dismantled to the point where industry doesn't have to hire 4<sup>th</sup> or 3<sup>rd</sup> class engineers anymore. They are hiring people who have only a segment of knowledge. If this is an industry trend, it is disturbing.

**John Cerniuk, Greater Toronto Airports Authority** - has been coming for many years and has seen many constructive changes and improvements. Is amazed that such a large group have an ability to work together so well and have accomplished so many objectives. Today has seen a great acknowledgment of the student area when PanGlobal gave an award to the top student in Canada. Suggested we should send the IPECC agenda to the chief engineers across the country. He would like to see contact made with more organizations and looks forward to more participation of industry.

**Bob Clarke, PanGlobal Training** - If this group would allow PanGlobal, we would like to put in the front of each course the representatives and organizations involved in the Power Engineering profession so the student is made aware of these. We would like to place the IPECC minutes on the website [www.powerengineering.ca](http://www.powerengineering.ca) so that more people from industry as well as students would be able to see this. Action: Bob/Garry/John

#### 15.0 College/Training Provider Reports – *submitted reports attached for the following colleges: (PR#8)*

- SAIT
- NAIT
- Medicine Hat College
- Confederation College

- College of the North Atlantic
- SIAST – Kelsey Campus
- Power Engineering Training Services
- BCIT
- Portage College
- Keyano College
- Assiniboine Community College
- Cambrian College – *no report this year*
- Holland College – *no report this year*
- Nova Scotia Community College – *no report this year*
- College of New Caledonia – *no report this year*
- Red River College – *no report this year*

#### **16.0 Closing Comments**

- Garry White has suggested at the committee's discretion that PanGlobal put information in the front of the texts with the website locations which describes the relationship of IPECC/SOPEEC. Bob Clarke requested that the chairs of IPECC and SOPEEC supply PanGlobal with the written information.
- Next meeting – offered by Toronto and Regina.

**Motion: That the 2006 IPECC/SOPEEC Committee meeting be held in Regina, SK or Toronto, ON. Moved by John Gosselink and Seconded by Gilbert Requena.**

- After discussion it was agreed that since Toronto has hosted twice since Saskatchewan it would be more appropriate to go to Regina for the 2006 meetings which would be on June 12, 13, 14, 15<sup>th</sup> in 2006.
- Bob Clarke felt that it might be appropriate for Toronto to host in 2007 at which time Paul Annis stated that he would rescind the 2006 offer.
- John Cerniuk commented that due to the 1999 meeting host being the source of much frustration and irritation the Ontario members prefer to wait until these internal jurisdictional issues are resolved. Possible date to have the IPECC/SOPEEC meetings back in Toronto would be 2008.
- Garry White thanked Mike Ouellet and SAIT for hosting and providing the wonderful buffet lunches. Thanks also to PanGlobal for providing the coffee breaks and Sunday night reception. Thanks to Ellen for helping scribe. Thanks to ABSA for sponsoring the Tuesday dinner.

Meeting Adjourned at 2:20 followed by a tour of the TransAlta EPiCentre given by Michael Ouellet and the dinner at 6 pm.

The Dinner was sponsored by ABSA with Gordon Campbell, General Manager giving a very informative speech about Power Engineering. ABSA's Tom Leming was a most imitable host. Participative entertainment (line dancing) was arranged for and demonstrated by PanGlobal's Ellen Flynn and her five partners (her sister Marilyn, Ann, Janice, Marcia and Lauren) Thanks for an enjoyable evening.

PR#1- Item 7 – Bob Clarke presentation

PR#2 – Item 8.1 – Bill Gwozd presentation

PR#3- Item 9.0 – Doug Fleming letter

PR#4- Item 9.1 – Burke Bechtel presentation – outline for review/feedback – contact Burke for copy

PR#5- Item 11.4 – Jeff Parker presentation – available on request

PR#6 – Item 11.5 – Andy Shorthouse presentation – 1<sup>st</sup> class outline for review/feedback

PR#7 – Item 12.0 – Tem Leming Report

PR#8 – Item 15.0 – College Reports