

+49 6101 55 1322



TELEFAX

An: Herrn
Bertram Müller
Voith Siemens
Hydro Kraftwerkstechnik GmbH & Co.KG
Alexanderstr. 11
89522 Heidenheim

Seiten: 4
Unser Zeichen: GE1
Bearbeiter: Jordan Rahlwes
Telefon: +49 6101 55-1763
Telefax: +49 6101 55-1322
Postfach: D-61116 Bad Vilbel
Jordan.rahlwes@lahmeyer.de

Fax-Nr.: 07321 37 7830

Bad Vilbel, 18. Oktober 2007

Fragebogen Cigré


Sehr geehrter Herr Müller,
anbei erhalten Sie den Fragebogen der Cigré.

Mit freundlichen Grüßen

LAHMEYER INTERNATIONAL GMBH
nach firmierend unter Lahmeyer International Consulting Engineers GmbH


(i.A. Jordan Rahlwes)
Fachgebietsleiter Elektrotechnik

+49 6101 55 1322

SC A1 ADVISORY GROUP A1.02 – Hydro Generators WG A1.02-3 Generator Fire Protection	
Scope of work: Experience Update QUESTIONNAIRE	

6) Questionnaire with focus on Consulting Companies.

This questionnaire is an update in which this particular section is dedicated to the **Consulting Companies** that usually issue at least the project specification for the Generator Fire Protection. As already stated before in our opinion from the fire protection standpoint, the generator and its housing have to be considered as a whole in the design when fire extinguishing is to be installed, in order to guarantee the system's functionality and efficiency integrated in the concept of the power plant as a whole. With these questions we intend to get valuable information from the particular stand point of the **Consulting Companies** in order to compose a picture as complete as possible of the subject we are dealing with to see if the opinions do converge or not to the same point.

6.1) Is your company specialized in the design of the Generator Fire Protection:

- Isolated (only the equipment itself)
 - Integrated in the power plant design
 - Whole power plant design including the Generator Fire Protection

Any comment on that?

6.1.1) Should you work specifically with the Generator Fire Protection Equipment (not as a power plant designer) in which moment of the power plant's project are you normally engaged by your customer:

- bid stage (in order to get the data for the Generator Fire Protection's specs)
 - after the generator supplier was already defined
 - in a stage when your expertise will be taken in to consideration in the whole project including the required civil work for the proper adaptation and safe function of the Generator Fire Protection

- None of the above, please specify:

Any comment on that?

6.2) There are the factors (or reasons) that lead your clients to order a Generator Fire Protection project from your company. According to your experience, considering these factors, who decides if the generators have to be equipped with Generator Fire Protection?

- The customer that place the order to you (not necessarily the final user – it may be the integrator)
 - The insurance companies that demand it towards the final user in order to cover the power plant's risk
 - The final user that may earn financial advantages towards the insurer by installing such a protection and requires it either directly or via integrator.
 - Power plant workers Labor Union Demands towards the final users
 - Final users' own internal philosophy
 - You are asked to give an advice/opinion

Any comment on that?

6.3) If the choice is yours do you have a preferred extinguishing method?

- Yes
 - No


If yes please indicate which:

CO₂ - Equipment or Inergen

Brazilian Regular Member of SC-A1: Eri Ferreira Figueiredo
 <eriff@uol.com.br>

Convener of Working Group A1.02-3: Alexander Gromow (GIFEL-Brazil)
 <a.gromow@gromow.com>

+49 6101 55 1322

SC A1 ADVISORY GROUP A1.02 – Hydro Generators WG A1.02-3 Generator Fire Protection Scope of work: Experience Update QUESTIONNAIRE	
--	---

If no, please indicate how you determine the extinguishing media for each particular case:

6.3.1) – If you have the choice, which is the extinguishing media you usually chose for:

- a) Above water power plants (open-air): *CO₂*
- b) Cavern type power plants: *Water or CO₂ or Inergen*

6.4) From your experience, which is the type of generator fire extinguishing method more frequently used nowadays?

- CO₂
- Water Spray
- Inergen
- Other

If other please specify:

6.4.1) Do you recognize any change towards the former trend (status quo) in fire protection systems your country?

- Yes - No

If yes, please state it here:

6.5) Are there standards recommending generator fire protection in your country?

- Yes - No

6.5.1) If yes, which standards are these?

6.5.2) If not which standards do you follow in your work?

NFPA, IEC, VDE, DIN

6.5.2.1) Are there critical items in the application of these Standards that require special attention?

NO

6.6) Considering the existence of the recently launched standards (for instance NFPA 851), is there a need of any additional specific international standard on generator fire protection?

- Yes - No

Any additional comment? Please state here:

6.8) What is the state of the art in the detection in accordance to your experience?

- Smoke
- Heat
- Flame
- Other – please describe: *differential protection system*

Brazilian Regular Member of SC-A1: Eri Ferreira Figueiredo


<eriff@uol.com.br>

Convener of Working Group A1.02-3: Alexander Gromow (GIFEL-Brazil)

<a.gromow@gromow.com>

Empfangszeit 18. Okt. 11:30

+49 6101 55 1322

SC A1 ADVISORY GROUP A1.02 – Hydro Generators WG A1.02-3 Generator Fire Protection Scope of work: Experience Update QUESTIONNAIRE	
--	---

6.5.1) Which are the types of detection devices you normally use and/or recommend?

Smoke, ionization detection

6.5.2) Do you recommend any specific detection and control system to minimize unwanted fire extinguishing system operation (here is meant the unwanted release of the extinguishing media)?

combination of signals

6.6) Do you usually cooperate with the generator manufacturer on the Generating Fire Protection Question?

- Yes, there is a cooperation and joint work
 - No, our work ends with the issue of the specifications
 - It depends from case to case, please specify:

6.7) Do you usually cooperate with fire protection equipment manufacturer on the Generating Fire Protection Question?

- Yes, there is a cooperation and joint work
 - No, our work ends with the issue of the specifications
 - It depends from case to case, please specify:

6.8) Do you work also on refurbishment of Fire Protection Equipment on hydro generating plants?

- Yes
 - No

Do you have any comment on this issue you would share with us?

6.9) Do you follow you projects during erection and commissioning phases?

- Yes
 - No

If yes, can you tell us what are the most frequent problems you had to face in the case of the Fire Protection Equipment?

6.10) In your opinion is a Generator Fire Protection installation required nowadays?

- Yes, *depending on the kind and location of plant, as well as plant configuration.*
 - No

Do you have any comment on this issue you would share with us?

6.11) According to your opinion, is there any question that is missing in this part of the questionnaire?

- Yes - No

If yes, please state it here:

Brazilian Regular Member of SC-A1: Eri Ferreira Figueiredo

<eriff@uol.com.br>

Convener of Working Group A1.02-3: Alexander Gromow (GIFEL-Brazil)

<a.gromow@gromow.com>

Empfangszeit 18. Okt. 11:30