

## Colloquium Technical Program - Agra 2015

September 25 <sup>th</sup>			
8:00 – 8:10	OPENING PLENARY	12:20 - 13:20	LUNCH
<b>Session Chair</b>	<b>R.P. Sasmal</b>	<b>Session Chair</b>	<b>Bjarne Andersen</b>
8:10 – 8:30	<b>DC Harmonic Filter Design and Mitigation of Induced Fundamental Frequency Currents for the NEA 800 kV HVDC Multi-terminal Project</b> <i>N.L. Shore, A. Gangadharan, A. Kumar, A-K Skytt</i>	13:20 – 13:40	<b>Research of the Control Strategies for the ±500kV Xiluodu-Guangdong Double-Circuit HVDC Project</b> <i>Jiang Lu*, Yangzheng Wang, Le Chen, Yongping Wang</i>
8:30 – 8:50	<b>Design and Operational Aspects ±800kV, 6000MW Champa-Kurukshetra Parallel HVDC Bipole System</b> <i>Vishwajeet Singh, M.S. Rao, S Bhattacharya, M M Goswami</i>	13:40 – 14:00	<b>Feasibility Study for 6000 MW Raigarh (Chattisgarh) - Pugalur (Tamil Nadu) - Trichur (Kerala) HVDC Transmission System</b> <i>Ebin Cherian, Vishwajeet Singh, M. S. Rao, B.B.Mukherjee, M M Goswami</i>
8:50 – 9:10	<b>Design Aspect of NER-AGRA Multi-Terminal HVDC Project (NEA800)</b> <i>Narendra Kumar, B.B. Mukherjee, Rakesh Kumar, M M Goswami</i>	14:00 – 14:20	<b>Study of ACDC interactions and control strategy in Hami-Zhengzhou UHVDC project</b> <i>Qiang Zou, Jie Tian, Zhenxia Shao, Dongxu Chang</i>
9:10 – 9:30	<b>Champa Kurukshetra an 800kV HVDC Scheme – Design Considerations Related to Parallel Operation of Stage I and Stage II Schemes</b> <i>R. Aggarwal, Boon Goh, Mike Li, J.M. Ferreira</i>	14:20 – 14:40	<b>North-East to Agra 800 kV HVDC Multi-terminal Project – Results for multi-infeed studies</b> <i>C. Jagadesh G. Krishna A. Kumar A-K. Skytt T. Tulkiewicz</i>
9:30 – 9:50	<b>Effect Of Mutual Coupling of Parallel AC Lines on +- 800kV HVDC Lines A Case Study for ± 800kV, 3000 MW Champa-Kurukshetra HVDC link</b> <i>Khirad Dhabar, Vishwajeet Singh, M.S. Rao, S Bhattacharya, M M Goswami</i>	14:40 – 15:00	<b>Real-time simulation studies to investigate series power tapping options in CIGRE HVDC benchmark model</b> <i>Amitkumar K. S., Dr. Ilamparithi T.I, Jean Belanger</i>
9:50 – 10:20	COFFEE BREAK	15:00 – 15:20	<b>Availability of Xiangjiaba-Shanghai ± 800kV HVDC Project for Last 5 Years</b> <i>Tinglu Ye, Fengqi Li, Zhenqiu She, Haijun Xu, Dianqiang Lou</i>
10:20 – 10:40	<b>Challenges in Renewable Energy Resources and Role of VSC-HVDC Technology in Integration To Grid</b> <i>Kaushik Hore, Amit Kumar, Lalit Ujjwal, Subhasis Jhampati, Rajesh Suri</i>	15:20 – 15:40	<b>Development of 20MW MMC VSC HVDC Transmission System for Windfarm Interconnection</b> <i>Jungsoo Park, Ji-Hun Kim, Jong Kyou Jeong, Dong-Gyu Lee, Sang-Min Yeo, June-Sung Kim, In kwon Park</i>
10:40 – 11:00	<b>Application of VSC HVDC Technology for Metro City Infeed</b> <i>Amol Salunkhe, Ashish Manohar Waknis, Mahesh Ambardekar, Arvind Kumar Sharma, Alok K Roy</i>	16: 00 – 19:00	<b>Technical visit to the HVDC 800 kV Multi terminal project at Agra &amp; Dinner</b>
11:00 – 11:20	<b>Reliability Evaluation of VSC-HVDC</b> <i>Ying Huang, Lingfei Li, Kaigui Xie, Bo Hu, Xiaolin Li, Jizhe Dong</i>		
11:20 – 11:40	<b>Current status and development VSC-based HVDC technologies in power system of Russian Federation</b> <i>A.Drozдов, A.Kiselev, O.Suslova</i>		
11:40 – 12:00	<b>High Speed Protection Aspects for VSC-Based HVDC Grids</b> <i>Vajira Pathirana, Udana Gnanarathna, Kasun Nanayakkara</i>		
12:00 – 12:20	<b>A Novel Control Strategy for MMC-HVDC Connected to Passive Networks</b> <i>Weihuang Huang, Ming Li, Shukai Xu, Ying Huang, Xiaolin Li, Hong Rao</i>		

**September 26<sup>th</sup>**

8:00 – 8:10		OPENING PLENARY	12:20 - 13:20		LUNCH
<b>Session Chair</b>	<i>Marcio Szechtman</i>		<b>Session Chair</b>	<i>Oommen Chandy</i>	
8:10 – 8:30	<b>Series Hybrid DC Converters with a Current Source Valve and a Voltage Source Valve</b> <i>Dongbin Lu, Jie Tian, Haiying Li, Songlin Chen, Yongping Wa</i>		13:20 – 13:40	<b>Compact Gas Insulated Systems for HVDC applications</b> <i>M. Tenzer, K. Juhre, M. Behne, D. Imamovic</i>	
8:30 – 8:50	<b>Study on Steady state and Transient over voltages in Hybrid Multiinfeed HVDC system on RTDS</b> <i>J.Sreedevi, Premila Manohar, R.S.Shivakumara Aradhya</i>		13:40 – 14:00	<b>General Guidelines for HVDC Electrode Design</b> <i>Joanne Hu, Hans Thunehed, Bruno Bisewski on behalf of WG B4.61</i>	
8:50 – 9:10	<b>Application Of Superconducting Fault Current Limiter In Mult-Terminal HvdC Systems</b> <i>Premila Manohar, Wajid Ahmed</i>		14:00 – 14:20	<b>DC-to-DC Capacitor-Based Power Transformation</b> <i>L. Barthold, D. Woodford, M. Salimi</i>	
9:10 – 9:30	<b>Practice of the First Five-Terminal VSC-HVDC Project</b> <i>Zhenxia Shao*, Yunlong Dong, JieTian, Gang Li, Zhiguo Li</i>		14:20 – 14:40	<b>Application of DC Breakers and Switches for the North-East Agra 800 kV HVDC Multi-terminal Project</b> <i>A-K Skytt, Fredrik Jansson, H. Alerman, A. Kumar</i>	
9:30 – 9:50	<b>A Comparison between DC Fault Clearance Mechanisms for Multi-terminal VSC-HVDC Systems</b> <i>C. Karawita, D.H.R. Suriyaarachchi, M. Mohaddes</i>		14:40 – 15:00	<b>Bipolar High Power Semiconductors for efficient HVDC Energy Transmission - State of the Art</b> <i>Mario Schenk, Jens Przybilla, Uwe Kellner-Werdehausen, Reiner Barthelmess Jörg Dorn, Günter Sachs, Markus Uder, Stefan Völkel</i>	
<b>9:50 – 10:20</b>	<b>COFFEE BREAK</b>		<b>15:00 – 15:30</b>	<b>COFFEE BREAK</b>	
10:20 – 10:40	<b>Multi-Terminal HVDC Operation Sequence for ±800kV, 6000MW HVDC NER – AGA Project (NEA800)</b> <i>Narendra Kumar, B.B. Mukherjee, Rakesh Kumar, M M Goswami</i>		15:30 – 15:50	<b>Segmentation with DC Transmission to Avoid Wide Spread Network Collapse</b> <i>D. Woodford, H. Clark, R.Adapa, K. Epp, M. El Gasseir</i>	
10:40 – 11:00	<b>Operational Experience of India Bangladesh Interconnector, 1 X 500 MW HVDC BTB Link– A Key Milestone in Development of SAARC Grid</b> <i>Puneet Tyagi, Shouvik Bhattacharya, Rakesh Kumar, M M Goswami, Syed Md. Sahriar Abdullah, A.K.M. G. Mohiuddin Ahmed, Arun Kumar Saha</i>		15: 50 – 16:10	<b>System Recovery Ancillary Service provided by VSC-HVDC in Transmission Network</b> <i>E. Starschich, T. Westerweller, M. Vor dem Berge, J.-W. Strauss, Dr. M. Dommaschk, H. Bouattour</i>	
11:00 – 11:20	<b>New HVDC control system features in New Zealand to better support renewable generation</b> <i>John Gleadow, D. Crawshay, V. Lo, M. Phethean</i>		16:10 – 16:30	<b>Employing SVC at weak LCC HVDC terminals and comparison with VSC HVDC</b> <i>Dragan Jovcic, Carl Barker</i>	
11:20 – 11:40	<b>Adapting the controls of Rio Madeira HVDC transmission systems to improve the frequency stability of generators in Jirau and Santo Antonio power plants</b> <i>Paulo Fischer de Toledo, Maxwell Fernandes Pinto, A.F.C Aquino, A.A Nohara</i>		16:30 – 16:50	<b>HVDC LCC Technology Developments to facilitate Integration of Bulk Wind Power Resources</b> <i>C. Bartzsch, M. Haeusler, A. Chaudhry, P. Kohnstam</i>	
11:40 – 12:00	<b>Early Investigations Of Nelson River Pole 1 Thyristor Leakage Problem</b> <i>X. Li, N. S. Dhaliwal, A. Keitley, N. Kirby, C. Barker</i>		16:50 – 17:10	<b>Application of Concentric Rings of Electrodes</b> <i>Rao Atmuri</i>	
12:00 – 12:20	<b>Hybrid STATCOM Systems Based on Multilevel VSC and SVC Technology</b> <i>M. Halonen, A. Bostrom</i>		17:10 – 17:30	<b>Development of VSC Technology based STATCOM</b> <i>Lal Ghamandi</i>	