



PUNJAB STATE TRANSMISSION CORPORATION LIMITED

Regd. Office : PSEB Head Office, The Mall, Patiala-147001

NEWS LETTER

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220 KV Sub Station Bangan

220 KV Sub Station Bangan upgraded from 66 KV was commissioned on 19th July, 2013. This Sub Station has one 220 KV T/Fs with 160 MVA capacity and two 66 KV T/Fs with 20 MVA capacity. Sub Station is connected with the following substation through 220 KV lines.

- 1) 400 KV Sub Station Bhalwan
- 2) 220 KV Sub Station Sunam
- 3) 220 KV Sub Station Patran
- 4) 220 KV Sub Station Chajjli

Following 66 KV sub stations are being supplied from this substation.

- 1) 66 KV Moonak
- 2) 66 KV Hamirgarh
- 3) 66 KV Mandvi
- 4) 66 KV Bhutal
- 5) 66 KV Ghamur Ghat

With the up gradation of substation, the load of 220 KV Patran has reduced, as earlier load of Bangan Sub Station and its connected substations was supplied from 220 KV Patran, which was overloaded. Now with the up gradation of substation load is supplied from 400 KV substation Bhalwan and voltage profile of substation and 11 KV feeders has improved.



220 KV Sub Station Bangan

DO RIGHT SAVE LIGHT

Half Yearly Progress

HALF YEARLY PROGRESS OF PSTCL (July-December 2014)					
Sr.no	Description	Up to 30.6.2014	Up to 31.12.2014	Net progress	Remarks
1	Sub- Station ending the year				
A	400 KV	03	04	01 nos.	
B	220 KV	88	89	01 nos.	
C	132 KV	79	78	-1	132 KV Dharamkot upgraded to 220 KV and taken in 220 KV
	Total	170	171	1	
2.	Capacity in MVA				
A	400 KV	2260.00	2890.00	630.00	
B	220 KV	20822.50	21649.50	827.00	
C	132 KV	6211.50	6365.5	154.00	
	Total	29294.00	30905.00	1611.00	
3.	Transmission Lines (Ckt. Kms.)				
A	400 KV	1570.734	1570.734	0.0	
B	220 KV	6527.293	6732.523	205.230	
C	132 KV	3196.778	3200.228	3.450	
	Total	11294.805	11503.485	208.680	

Family Achievements



Ms. Neha Gupta D/o Er. Navdeep Kumar Garg, ASE/ Tech. Audit (Civil), completed B.Tech from NSIT, New Delhi and now she is doing MBA from MDI Gurgaon. She has won the prize of Rs. 4 Lac out of 6 selected girls throughout India in the Competition. The Competition was conducted by City Bank, America

Congratulations !

Mission of an organization

The mission explains why the organization exists-its overall purpose. Mission is a precise description of what an organization does to materialize the vision into reality. Each employee's actions should demonstrate the mission statement in action.

Significance of PSTCL's Mission

For becoming an efficient institution, it is important to upgrade and develop operational boundary conditions on sound "economic principles". It can be attained by bringing down transmission losses, optimize revenue generation through alternative use of available resources, adopting cost control measures and exploring uncontrolled revenue path. Every great organization cares for the environment in which it operates. It cares for the society in which it exists. Corporate Social Responsibility (CSR) is the phenomenon whereby corporations share their profits with the society. For example, by adopting environment friendly techniques we can do our bit for saving the planet, and make use of the carbon credits so earned, as well.

Training Programme/Workshop/Seminar Conducted from July to Dec, 2014

- ✓ Seminar on Tax Proposals arising out of Union Budget at Hotel Eqbal Inn, Patiala on 16th July, 2014
- ✓ One day Seminar on "Companies Act, 2013, Rules made there under and its implementation" on 9th Aug, 2014 at Chandigarh
- ✓ Four Days residential Training Program for UDC/ LDC employee at Mahatma Gandhi State Institute of Public Administration, Punjab, Sec-26, Chandigarh from 19th to 22nd Aug, 2014.
- ✓ Comprehensive Tutorial Program on "Transformer Oil, Lubricating oil and Polymeric Composite Materials" organized by CPRI, Bangalore.
- ✓ Training Program on "Power Factor Improvement and Reactive Power Management" from 15th to 18th Dec, 2014 by CIRE, Hyderabad
- ✓ Training program on "Open Access, Power Trading & Tariffs" from 9th to 12th Dec, 2014 by CIRE, Hyderabad
- ✓ 5 days Basic Computer training Programme to employees from 4th to 10th Dec, 2014 and 15th Dec to 19th Dec, 2014.
- ✓ 12th National HRM Summit on "Building Organizations for a Globalized, Ultra-Competitive World" on 16th December, 2014 at Hotel Le-Meridian, New Delhi.

Retirements (July-Dec. 2014)

PSTCL Wishes the following a Good Luck and Healthy Life

- Er. Pritpal Singh retired as Dy.CE on 31.7.2014
- Er. Harjinder Singh retired as AE on 31.8.14
- Er. Ramesh Kumar Bector retired as AE on 31.8.14
- Er. Anil Kumar Uppal retired as Addl. SE on 30.9.2014
- Er. Parmjit Singh retired as AE on 30.9.2014
- Er. Kulwant Singh Sidhu retired as Dy.CE on 31.10.2014
- Er. Krishan Murari Sharma retired as AEE on 31.10.2014
- Er. Vijay Kumar retired as AEE on 30.11.2014
- Er. Harjinder Singh retired as AE on 30.11.2014
- Er. Gurcharan Singh retired as AEE on 31.12.2014
- Er. Sarabjit Singh retired as AEE on 31.12.2014
- Er. Sham Singh retired as AEE on 31.12.2014
- Er. Madan Lal retired as AEE on 31.12.2014
- Er. Prem Singh retired as AE on 31.12.2014



Celebration of Independence Day 15th Aug, 2014

The Independence Day i.e. 15th August, 2014 was celebrated at Officer's Flat, Patiala with great enthusiasm by PSTCL. Flag hoisting Ceremony was done by Chief Guest Sh. Niraj Hit Abhilashi Tayal, Director/ Admin. Er. Shashi Prabha, Director/Technical, was the Guest of Honor. This was followed by a cultural programme.

Oil Testing and Diagnostic Testing Lab (An Article)

To cater to the need of Transformer Oil testing and Diagnostic Testing of Electrical equipments installed in Sub-stations of PSTCL, the lab was set up and started its operation from 22nd April, 2012 in Ludhiana. ODTL is not only engaged in the testing of Oil samples but also in various on-site testing that helps in assessing the performance of equipment like Power Transformer, L.A.'s, Battery Banks, C.T.'s etc.

New testing techniques for residual life assessment of Power transformers like SFRA (Sweep Frequencies Response Analysis) and IDA (Insulation Diagnostic Analysis) tests have been introduced and some of the facilities available in this lab are first in North India.

The brief description of some of the specialized testing procedures is given as follows:-

Dissolved Gas Analysis (DGA):- This test measures dissolved gas content present in the oil. Different gases will dissolve in the oil due to various types of thermal and electrical stresses occurring within the transformer. The testing kit has been supplied by M/s General Electric, U.K.

Dielectric Breakdown Voltage (BDV) :- The BDV test measures the ability of the oil to withstand electrical stress without failure. It indicates the presence of moisture, dirt and other foreign/conducting particles in the oil. Higher the value, lower the presence of contaminants. The testing kit has been supplied by M/s Megger, U.K.

Dielectric Dissipation Factor (Tan Delta) :- This test responds readily to presence of contaminants of material which might have been picked up by oil, due to improper manufacture or use of equipment. Also it indicates presence of soluble varnishes, resins and moisture. The testing kit has been supplied by M/s Baur, Austria.

Neutralization Number Test/Acidity of Oil:- This test gives measure of amount of acid materials (Both Organic and Inorganic) present in oil. Presence of acids in oil is detrimental; besides corroding various parts it lowers dielectric strength and often polymerize to form insoluble slug which can clog the cooling system. The testing kit has been supplied by M/s Mettler Toledo, Switzerland.

Furan Analysis :- Furans (organic compounds) are formed by degradation of paper insulation. Overheating, oxidation, and degradation by high moisture content contribute to destruction of insulation and form furanic compounds. HPLC (High Pressure Liquid Chromatography) will measure all the furaldehydes. The testing kit has been supplied by M/s Agilent Technologies, U.S.A.

PNA Analysis :- The Power Transformer oil is a mixture of organic compounds comprising of Paraffinic, Naphthenic and Aromatic hydrocarbons. The Power Transformer oils that are used have either higher Paraffinic or Naphthenic percentage with Aromatic hydrocarbons contributing about 4-8% only. This test analyses the percentage of each type of hydrocarbon in oil. This test is generally performed on new and unused oil to ascertain its base. The testing kit has been supplied by M/s Agilent Technologies, U.S.A.

Sweep Frequency Response Analysis (SFRA):- This test method can be used to predict winding condition in broad variety of existing power transformers without entering the transformers. Results could be applied to assess the condition of Power transformers. The testing kit has been supplied by M/s Megger, U.K. Since its introduction 46 No., 100 MVA and 160 MVA Power

Transformers have been tested till date.

IDAX- This test is basically a residual life assessment technique and it measures the capacitance and tan delta/power factor of the insulation between power transformer windings at multiple frequencies. Plotting the results as a curve makes it possible to assess the condition of the oil and solid insulation, assess the moisture level in the solid insulation and other potential insulation problems. The test can be performed at any temperature. The testing kit has been supplied by M/s Megger, U.K. Since its introduction 45 No., 100 MVA and 160 MVA Power Transformers have been tested till date.

Line Impedance:- This test helps in calculating data for proper setting of distance protection relay or fault location. Line parameters such as zero sequence impedance, positive sequence impedance or ground impedance matching factor are calculated in this test. The kit has helped in actual measurement of impedances of 400 kV Bundled conductor lines. The testing kit has been supplied by M/s Omicron, Austria. The Line impedance of 400 kV Talwandi Sabo double circuit (Twin-Moose), 400 kV Makhu- Amritsar double circuit (Twin-Moose), 220 kV Pakhowal-Malerkotla circuit (Single-Zebra) and 220 kV Sama-RSD Shahpur Kandi double circuit (Single-Moose) has been measured till date.

LCM (Leakage Current Monitor) Test:- This test measures the resistive component of continuous leakage current in lightning arrestors. Also it investigates details in leakage current changes versus time to detect deteriorating trends, with no interruption of service. The testing kit has been supplied by M/s Doble, U.S.A. Earlier there was no method to test L.A.'s in PSTCL. With introduction of this test, 154 defective L.A.'s have been recommended to be replaced in PSTCL till date.

C.T.(Current Transformer) Analysis:- It performs the CT saturation test, measure the CT winding resistance and CT turn ratio automatically. It also indicates winding polarity and measures burden of CT. It also measures accuracy class, phase angle and indicate errors for ratio and phase angles for all types of ratings of CT's. The testing kit has been supplied by M/s Omicron, Austria. Since its introduction 28 No., 400 kV C.T.'s have been tested till date.

Calibration facilities:- Apart from the Transformer Oil and diagnostic testing, calibration facilities are available with this lab. The calibration facility for Transformer Turn Ratio meters, Temperature gauges of Power Transformers and Insulation Testers upto 5 kV is available in the lab. These instruments have been supplied by M/s Magger, U.K., M/s Cropico, U.K. and M/s Isothermal Technology Ltd., U.K.

ODTL Lab, Ludhiana

Departmental Accounts Exam



The Departmental Accounts Exam successfully conducted in Sept. 2014 for newly recruited employees against CRA-01/2011 and CRA-02/2012. The result of Departmental Accounts Exam has also been declared.

The riches of laughter (An Article)

The ability to laugh is a wonderful gift that we human beings are blessed with. It is said some animals too have this laughing ability, but we are not very sure.

Laughter can do wonders. It can create the shortest distance between two people. A few moments of laughing sensitize you to the beautiful things around you and you start appreciating life. This in turn leads you to explore all the positive aspects of life. And hence your life becomes richer and more meaningful.

From the balcony of my house, I see groups of people daily early in the morning in the nearby park to begin their day with a hearty "laughing session". It is the roar of their laughter that wakes me up and makes me think right at the beginning of the day how to make life simpler and happier with a hearty laugh.

It does not take much time; only that one has to sink in mind the point that keeping a smile and a laugh or two a day makes your day.

Charlie Chaplin had a favorite quote, "A day without laughter is a day wasted."

Laughter is the outburst of truth from your soul.

Comedian Bob Hope says, "I have seen what a laugh can do. It can transform almost unbearable tears into something bearable, even hopeful."

And, those who are familiar with social media have this beautiful word 'LOL' popping up quite often. What is it meant for?

Not only to keep yourself in good humor but to let others too be in good humor.

By: Training Cell

Brief of Cancer Awareness Programme

A Cancer Awareness programme was organized by CE/HPI, PSTCL, Patiala on 29/08/2014 at Shakti Sadan for women. It was inaugurated by Director/Technical, Er. Shashi Prabha. Doctors from Mata Kaushalya Hospital, Patiala gave presentation regarding the causes and prevention of cancer and later physical check up also done.



Basic Computer Training Programme at Training Cell, Patiala



Note: All the employees of PSTCL are requested to contribute in the Newsletter of PSTCL in following fields:

- a) Achievements made by the employees, their family members and children in different areas.
- b) Phrases/ quotes etc.



Glimpses



Cultural Programme during Independence day 2014



Tree Plantation by Dir./Admin during his Visit at 400 KV S/S Bhalwan (Dhuri)



Horticulture Activities at Shakti Sadan, Patiala

Save Energy Save Mankind