



**Management Solutions**

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# PROJECTS IN NIGERIA

## LOADBREAK SWITCH

## TRANSFORMER MAINTENANCE/SERVICE



Presentation:

# Management Solutions

## Dipl. Wirtschaftsing. Albrecht Heim





## EXPLANATION ON THE CONSTRUCTION OF LOADBREAK SWITCH

**dh**  
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## **SAMPLE OF LOADBREAK SWITCH**

**WITH SILICON ISOLATORS UPTO 33 kV,  
COULD BE PRODUCED WITH PORCELAN ISOLATORS  
PRODUCTION ON DEMAND**





## **PARTS UP TO 6 METER HEIGHT**

**ZINK COATED PARTS UPTO 6 METER HEIGHT CAN BE PRODUCED IN THIS HALL**





## **TRANSFORMER TOWERS (ZINK COATED)**

**THIS TOWERS ARE CONSTRUCTED FOR 33 kV VOLTAGES  
BUT ARE ALSO USED AS GSM TOWER, WITH A DIFFERENT SPECIFICATION  
OR SPECIAL CUSTOMER SPECIFICATION COULD ALSO BE PRODUCED**





## **ZINK COATED PARTS AND TRANSFORMER BOXES**

**PREPARATION OF ZINK COATED TRANSFORMER PARTS,  
WHICH ARE ALREADY COATED WITH ZINK (450° CENTIGRADE)  
ARE TO BE CLEANED FOR SMOOTH BODY IN THIS HALL**





## **ZINK COATED PARTS UP TO 6 METER LENGTH**

**IN THIS HALL, THE APPLICATION OF 450° C APPLIED TO TRANSFORMER PARTS AND BODY TO BE COATED WITH ZINK IS DONE**





## **ZINK COATED PARTS FROM THE FIRST TO THE LAST STEP**

**THE ALREADY COATED PARTS COULD BE SEEN AND PREPARED FOR TRANSPORTATION BY FORKLIFT**





## COMPLETED LOADBREAK SWITCH

THIS LOADBREAK SWITCH IS COMPLETED AND  
READY FOR MECHANICAL FUNCTION TEST



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# TRANSFORMER MAINTENANCE AND SERVICE



## **TRANSFORMER MAINTENANCE YARD**

**ALL KINDS OF TRANSFORMERS IN THIS MAINTENANCE YARD ARE TO BE REPAIRED, TESTED AND DELIVERED AGAIN TO CUSTOMERS.**

**BIGGER TRANSFORMERS ARE REPAIRED IN THE COMPOUND OF THE CUSTOMERS DEPENDING ON THE NUMBER OF THE TRANSFORMERS, THE SMALLER TRANSFORMERS COULD ALSO BE REPAIRED DIRECTLY IN THE COMPOUND OF THE CUSTOMERS**





## **INSPECTION OF REPAIRED TRANSFORMERS**

**AFTER INSPECTION TRANSFORMERS ARE REPAIRED, TESTED  
AND PREPARED FOR TRANSPORT AND DELIVERY**





## **PRODUCTION OF TRANSFORMER CUBICLES**

**THE PRODUCTION OF TRANSFORMER CUBICLES, TRANSFORMER PARTS AND REPAIR PARTS ARE PRODUCED WITH MODERN MACHINES**





## **INSPECTION HALL OF TRANSFORMER CUBICLES**

**TRANSFORMER CUBICLES ARE INSPECTED, CERTIFIED AND TESTED IN THIS DEPARTMENT**





## **VIEW OF PRODUCTION HALL**

**SOME PARTS OF TRANSFORMERS ARE PRODUCED IN THIS DEPARTMENT. THE PRODUCTION IS BASED ON MODERN MACHINE AND EQUIPMENT.**





## **PRODUCTION OF CONTROL BOARDS**

**SEVERAL KINDS OF CONTROL BOARDS AND CONTROL BOXES ARE PREPARED, MOUNTED AND TESTED IN THIS DEPARTMENT**





## **PRODUCTION HALL FOR CONTROL BOARDS**

**PRODUCTION FOR CONTROL BOARDS CARRIED OUT IN LARGE SERIES AND DELIEVERD JUST IN TIME**





## REPAIRED TRANSFORMERS

ALL TYPES OF TRANSFORMERS ARE MAINTAINED, TESTED  
AND CERTIFIED.





## **INSPECTION OF BIG TRANSFORMER**

**IN THIS MAINTENANCE YARD THE TRANSFORMERS  
ARE PREPARED FOR SERVICE AND MAINTENANCE**





## **MAINTENANCE OF A 150 MVA TRANSFORMER**

**BIG TRANSFORMERS RECEIVE MAINTENANCE AND SERVICE  
IN THIS HALL**



## **MAINTENANCE HALL FOR TRANSFORMERS**

**IN THIS DEPARTMENT TRANSFORMERS ARE CHECKED AND REPAIRED IN ACCORDANCE TO CUSTOMERS ORDER**





## **SPECIAL TRANSFORMERS**

**PRODUCED TRANSFORMERS  
ACCORDING TO CUSTOMER SPECIFICATION**





## **SPECIFIED TRANSFORMER PRODUCTION**

**COSTUMER SPECIFICATIONS ARE WELCOME  
THE REQUEST OF THE CUSTOMERS CAN BE FULLFILLED IN THIS  
DEPARTMENT, ACCORDING TO SPECIFICATION**





# Transformer Manufacturing/Service



## **TRANSFORMER MANUFACTURING**

**NEW AND MODERN TECHNOLOGY, PRODUCTION ON DEMAND,  
SELECTED MATERIALS AND GOOD COMMUNICATION WITH THE  
COSTUMERS IS NESSASARY FOR HIGH QUALITY PRODUCTS  
AND SUCCESS**





## **DETAILED EXPLANATION OF MATERIAL**

**SELECTED MATERIALS AND SELECTED SUPPLIERS  
OF THE MATERIAL FOR PRODUCTION  
IS THE GARANTIE FOR HIGH QUALITY STANDARD.**





## **MODERN TECHNOLOGY AND MACHINES FOR TRANSFORMER MANUFACTURING**

**NEWEST TECHNOLOGY AND MACHINES MAKING IT POSSIBLE TO PRODUCE TRANSFORMERS WITH HIGHEST QUALITY.**





## **OIL TRANSFORMER BOXES**

**ZINK COATED TRANSFORMER CASES PREPARED  
FOR PRODUCTOIN.**

**THIS TRANSFORMER CASES ARE FOR COSTUMER IN SWEDEN**





## **OIL TRANSFORMER PRODUCTION HALL**

**EXPLANATION OF PRODUCTION LINE, THE TRANSFORMER BUSHING ARE INSTALLED ON INDIVIDUAL TRANSFORMERS AFTER WHICH TRANSFERED FOR TESTING ARE MADE**





## PREPARATION FOR TRANSFORMER WINDING

THE PREPARATION OF THE WINDINGS  
ARE DONE IN THIS HALL

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Solutions made on Earth



## **ASSEMBLING OF BIGGER TRANSFORMERS**

**THE BIGGER TRANSFORMERS ARE ASSEMBLED IN THIS HALL  
WITH INSTALLATIONS OF THE TRANSFORMER BUSHING ON  
THE TRANSFORMERS**





## **DIFFERENT KINDS OF TRANSFORMERS**

**DIFFERENT KINDS OF TRANSFORMERS ARE PREPARED FOR FURTHER PRODUCTION STEPS**





## **ASSEMBLING OF TRANSFORMER WINDINGS**

### **PART OF PRODUCTION STEP**

**IN THIS HALL THE TRANSFORMER WINDINGS ARE FIXED IN THE TRANSFORMER CASES, THEREAFTER TRANSPORTED TO THE DEPARTMENT WHERE THE TRANSFORMERS ARE FILLED WITH OIL**





## COMPLETED TRANSFORMERS

THE TRANSFORMER IS COMPLETED AND READY FOR TESTING, AFTER WHICH WILL BE PACKAGED FOR EXPORTATION





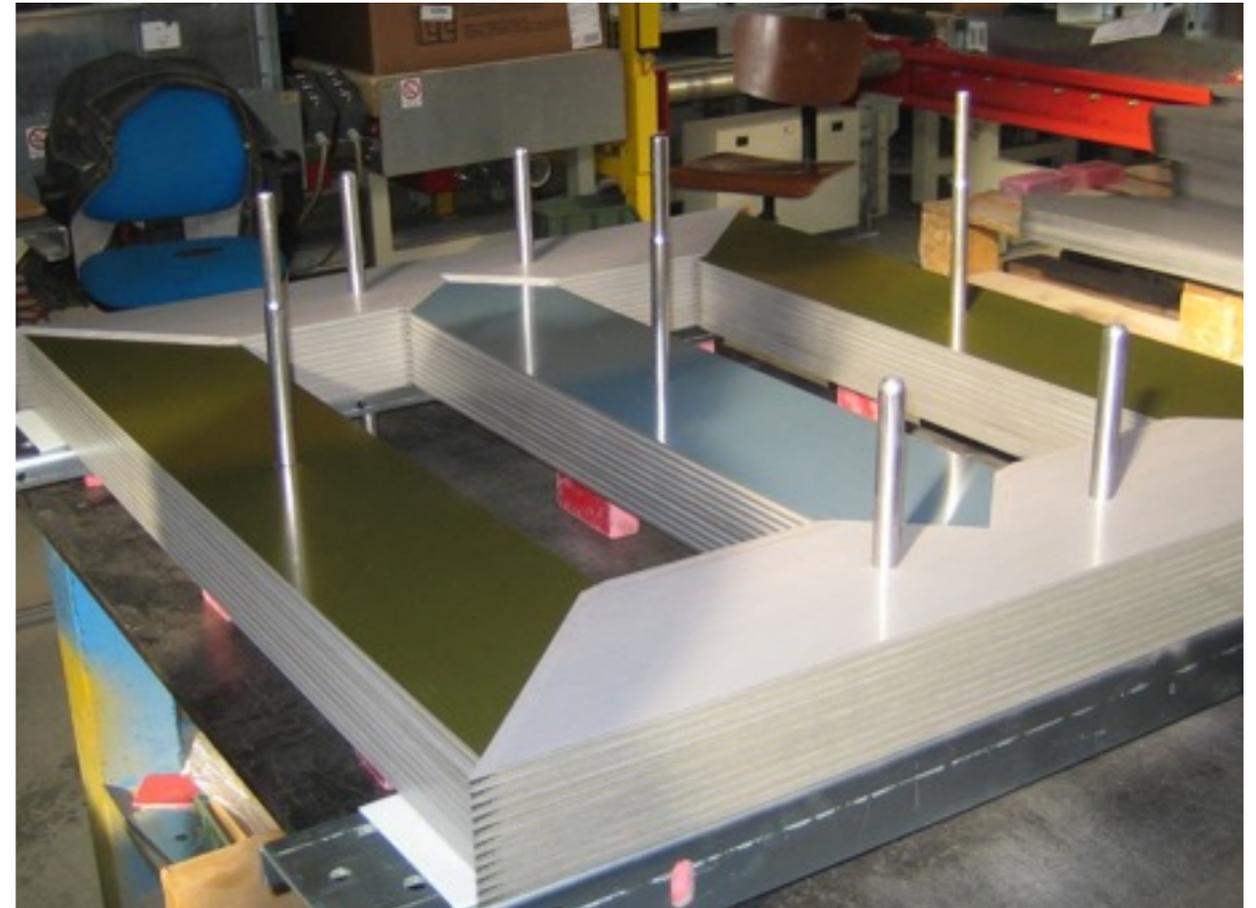
## TRANSFORMERS READY FOR LOADING AND EXPORTATION





# **TRANSFORMER MAINTENANCE AND SERVICE**

Part 2



## EXPLANATION OF TRANSFORMER PRODUCTION

Euroeletto Italia





## **MODERN TRANSFORMER PRODUCTION HALL**

**MODERN PRODUCTION ON DEMAND**





## **PRODUCTION OF INSTRUMENT TRANSFORMERS**

**INSTRUMENT TRANSFORMERS (CURRENT AND VOLTAGE TRANSFORMERS)  
AND SMALLER POWER TRANSFORMERS SUCH AS, 50 kVA ARE PRODUCED IN  
THIS ENVIROMENT**





## **TRANSFORMER TESTING AND CERTIFICATION**

**COMPLETED TRANSFORMERS MUST BE TESTED AND CERTIFIED FOR ISO CERTIFICATION, THEREFORE THE PROCEDURE HAVE TO BE CARRIED OUT IN THIS DEPARTMENT**





## **SPECIAL TRANSFORMERS**

**SPECIAL TRANSFORMERS LIKE DRY TYPE TRANSFORMERS ARE PREPARED, PRODUCED AND TESTED IN THIS DEPARTMENT**





## **MANUFACTURED TRANSFORMERS**

**DIFFERENT TYPES OF TRANSFORMERS ARE COMPLETED AND PREPARED FOR TRANSPORT TO THE CUSTOMERS.**





## **TRANSFORMERS READY FOR TRANSPORTION**

**LAST INSPECTION AND THE TRANSFORMERS ARE  
READY FOR CUSTOMERS PICK UP**





## **TRANSFORMER MAINTENANCE AND SERVICE IN NIGERIA**

**CONCEPT DISCUSSION  
AFTER INSPECTING THE TRANSFORMER PRODUCTION,  
MAINTENANCE AND SERVICE DEPARTMENTS.**





Energy-Facilities?  
Yes we can.





Nigeria Vision Energy supply in 2016 ?!





Discussion to Install a Transformers Maintenance.  
Build Infra-Structure to Transformer-Stations.  
To Improve a Mobil-Transformer-Maintenance.





Discussion to Improve Technical-Elektric-Service.





Wind Measurements in Nigeria  
Wind-Turbines as Renewable Energy Facility?

