TenarisSilcotub

Internship Projects 2016

47 projects in 5 locations: Zalau, Cluj-Napoca, Calarasi, Bucharest, Campina.

ZALAU

Department: Production

1. **Electronic reports for PL**

   Develop a web page where we can upload all our reports from the mill; this web page will replace the paper reports written by hand. The source of the web page will be on a server that can be accessed from all the workstations in mill.

   Candidate profile:

   Specialization: Automation & Computer Science / IT
   Specific knowledge: WEB Design, SQL or other data base knowledge

2. **Real time production display**

   Develop a software that can manage the production of the threading machines in real time; this information will be displayed in the mill bay in real time Std vs. Real.

   Candidate profile:

   Specialization: Automation & Computer Science / IT
   Specific knowledge: Software development

3. **Automatic dope applying system for PL**

   Design an automatic machine that is able to apply high viscosity dope on the coupling or the thread; the quantity should be constant and the applying uniform on the surface.

   Candidate profile:

   Specialization: Mechanical/ Electrical Engineering
   Specific knowledge: Electric motors, pneumatics, AutoCAD or similar software knowledge

4. **Increase the productivity of the Boiler Line**

   Reduce the time spent of signalized pipes in prove-up area.

   Candidate profile:

   Specialization: Automation

5. **Reduce the cost for the spare parts.**

   Blade consumption in function of each steel grade. Reviewing and improving working parameters for cutting operation at FRAMAG saw.

   Candidate profile:

   Specialization: Mechanical Engineering, Machine Building

6. **Continuous mill working stands: establish the maximum admitted worn out; repair schedule for stands; operative practice for checking and adjusting the gaps**

   Quality improvement: total rejection /reduction external defects for the stretch reducing mill

Candidate profile:
Specialization: Mechanical Engineering, Machine Building

7. **Magnetic Crane for bars**
Reducing risk in the area of unloading wagons.
Candidate profile:
Specialization: Machine Building, Mechanical Engineering.

8. **Increase the reliability of the laser that measures the billet length**
Candidate profile:
Specialization: Electrical Engineering (Electro - mechanics)

9. **Catalog of defects occurred on Heat Treatment process (OCTG, Cold Drawn (including Q line) and Boiler line).**
Issuance of a document including details such as defects description, heat treatment area where the defect occurred, orientation, laboratory analysis, root cause, corrective and preventive actions to avoid reoccurrence and prevent occurrence of the defects. Creation of dedicated defect code for these defects to start identifying them in the next processes that will help to build the historical data for these type of defects. Training with the operators based on the defect catalog in each HT process. Implementation of the identified corrective actions evaluating the effectiveness of the actions in the production flow.
Candidate profile:
Specialization: Material Science Engineering
Analytical skills, good communication skills (as the internship will collaborate with different departments/operators); excellent command of Microsoft Office

10. **Replacement of the Siemens S5 automation equipment used as a control component of the Cutting Saw, with the new generation Siemens S7.**
Reason: S5 is obsolete, hard troubleshooting and hard to find spare parts.
Content: S5/S7 hardware equivalent list, including the actual/future electrical drives; topology proposal / new automation schematics; new configuration of the automation panel; list of the equivalent software for the new hardware configuration; budget report
Candidate profile:
Specialization: Automation

11. **Revamp the hydraulic unit station for stands holders at the Stretch Reducing Mill (technical drawings)**
Install a new pumping unit; revamping the hydraulic unit station layout, hydraulic operation components and level and temperature sensors; update the existing drawings with the actual hydraulic unit layout
Candidate profile:
Specialization: Mechanics/ Mechatronics/Machine Building
Basic knowledge of hydraulics, components representation.

Department: Supply Chain

12. **Bar Yard Crane Optimization**

Built a database with crane activities in the HRM and propose new ways in using it to be more efficient in unloading bars and "feeding" the line

Candidate profile:

Specialization: Machine Building (Economical Engineering)

Knowledge of Industrial systems optimization

13. Loyalty Program for Transport Companies

Define a Loyalty program for truck drivers and trucks currently used

Candidate profile:

Specialization: Mechanical Engineering (AR - Road vehicles), others

Advanced excel skills

14. Warehouse saturation

Warehouse optimization and saturation analysis

Candidate profile:

Specialization: Engineering

Advanced excel skills/database handling

Department: Quality

15. Statistical Process Control in Cold Drawn Plant: Generate database; Run capability analysis (CPK); Optimize the current application in use (improve, simplify, eliminate bugs); Extend the application for new area

Project objective - to optimize the current application in use (Visual basic code integrated in excel files). Below is a brief description of the activities done to achieve the final output to calculate the CPK capability index. Tube dimensional measurements (such as outer diameter) recorded by the operators in excel files are being automatically saved as standalone forms (when closing the excel file) and their content is added in a local computer database. When a certain standalone form is being reopened later on, the VBA code is checking the database before saving its content to make sure the information is not doubled. The information from the local databases is transferred to a general database located in an Intranet site server. The server database has to check if the number of measurements done by each operator are respecting the minimum number of measurements requested by the internal procedures.

Candidate profile:

Specialization: Automation & Computer Science / ETTI/ IT

Excellent knowledge of IT Visual basic programming

16. ICC Instrument Catalogue

Project objective - Development of a catalogue for all internal used instruments (Measuring, Monitoring and Testing Equipment). The catalogue will contain pictures according to instrument families and types, to be grouped to inform all the internal users. Will help the internal users to identify more specific the instruments asked for verification and for their usage. Will also include the update in ICC (Instrument Calibration and Control) system of all the existent instruments, and will require templates creation.

Candidate profile:

Specialization: Technical

Advanced English, Excel medium.

≣ **Tenaris**Silcotub

Department: Procurement

17. Subcontractors management project

Define the process to approve the usage of subcontractors in Silcotub, interacting with Health &Saftey, Patrimonial Management, Engineering and Maintenance. Prepare a procedure to formalize the process.

Candidate profile:

Specialization: Engineering

Analytic skills, good knowledge of MO (Word, Excel, PPT)

18. Market scouting for wooden products Frame Agreements and renewal strategy definition

Scout the domestic market for finding alternative suppliers to be taken in consideration for the renewal of the contracts. Understand the main factors influencing the production costs for the most important wooden products bought by TenarisSilcotub and define a cost structure. Define together with the tutor the renewal strategy to be applied.

Candidate profile:

Specialization: Engineering

Analytic skills, advanced knowledge of Excel

Department: Human Resources

19. Video Work Instructions Project

Review the list of L4 Working Procedures in Silcotub (together with the lines); support the line responsible to identify the working stages to be converted in short video; adjust the films and load it in the system (linked with IDM); follow-up of the approvals of the new Video WI.

Candidate profile:

Specialization: Engineering (medium technical knowledge,), Others

Gadgets fan, English advanced

20. On-boarding Program

Simplify the formal on-boarding process required by Staffing Procedure by elaborating specific on-boarding programs for each department and sub department together with area responsible. Define the needs, adjust the form, incorporate training and agree with the manager the normative/key meetings and overlapping topics. Define standard On-boarding Program for Interns.

Candidate profile:

Specialization: Sociology, Psychology, Letters, Communication & Public Relations, Others

English advanced

Department: Industrial Management Control

21. SharePoint integration of KPI

Create an integrated SharePoint page for Silcotub main KPI's, as a summary of the performance of the Lines.

Candidate profile:

Specialization: Information Technology/Automation & Computer Science/ ETTI/Economical Engineering
English advanced

22. Energy model

Create a user friendly and easy to update model for energy consumption of Silcotub' s main lines, regarding real and standard consumption.

Candidate profile:

Specialization: Faculty of Informatics/Automation/Economical Engineering
English advanced

Department: Patrimonial Management

23. Evaluation platform for personnel services

Developing and implementing an evaluation platform, integrated to Tenaris workplace, regarding the satisfaction level about personnel services managed by PAMA: define surveys models; create surveys; create data base of the respondents; lunching surveys; collecting and processing survey answers; design standard models for survey results presentation; develop archive place for the surveys and results.

Candidate profile:

Specialization: University/Information; Technical University/Automation and computer science
Web design, good communication, working in team, statistics knowledge.

24. Processing the data base of the archived documents, I the period 2005 - 2015, optimize the evaluation and identification of the archived documents

Developing and implementing a data base platform which will permit a direct and efficient access to the interested documents among the archived documents, both in electronic way and physical one.

Candidate profile:

Specialization: University/Information; Technical University/Automation and computer science
Web design, good communication, working in team, statistics knowledge.

Department: IT

25. IT Infrastructure Risk Matrix

Preparation of a Risk Matrix for the existing IT infrastructure, responsibility definition, action plan, preemptive measures.

Candidate profile:

Specialization: Computer Science, Informatics, Economic Informatics
Basic economical skills or related knowledge (budgets, inventory, fixed assets)

Department: Administration and Finance

26. Fixed Assets documentation according with Romanian Law

Preparing the documentation (invoices, contract, final acceptance test, etc) by each functional Fixed Asset.

Candidate profile:

Specialization: Economics
Analytical skills and good organizer

CLUJ-NAPOCA

Department: HR Shared Service

27. Global Taxation Within a Multinational Company

Directly involved with the International Assignments Cash Flow team, helping them in the Tax Return Process. Analysis of the tax system differences between countries and the impacts of the payroll system in the multinational companies. Also, analyze what tools the companies use in order to achieve equity.

Candidate profile:

Specialization: Economics & Business Administration (TAX, Fiscal Science)

Logical thinking, appeal for numerical data

Good Excel skills, English proficiency.

28. International assignees database

Create a database that contains all the information needed during the management of the assignment (assignment details, family composition, benefits details and follow up, etc.) for TENARIS International assignees (about 250 actives) with a desktop application.

Candidate profile:

Specialization: Economical Informatics; IT; Computer Science; International Relations

Java programing using NetBeans or other similar free program;

SharePoint

29. Process Improvement: Reporting

Develop databases (Access, Excel) using macros for current report used in HR SSC (all sub-areas)

Candidate profile:

Specialization: Economical Informatics;

MS Office, Excel advanced (Macros knowledge); critical & analytical thinking

30. Work Instructions Development and Update

Improvement or update of 2 work instructions/area

Candidate profile:

Specialization: Economics, Sociology, Human Resources, International Relations

Excel Italian, MS Office; focus on improvement; critical and analytical thinking

Department: International Assignments

31. Factors involved in the success of International Assignments in a global organization

By analyzing historical data from within the company, and also based on the available literature, identify the main factors that can predict the success of an international assignment and propose courses of action for increasing the rate of success within the company.

Candidate profile:

Specialization: Sociology, Psychology, Economics

![Tenaris Silcotub logo]

English, Research methodology, Human Resources management

CALARASI

Department: Industrial Management Control

32. Optimize logistics of external scrap yard

Perform a detailed analysis of the movements inside the external scrap yard and propose ways to Improve /optimize the logistics cost.

Candidate profile:

Specialization: IT/Automation &Computer Science/Economical Engineering

Analytical skills, be able to prepare different simulations

Department: Environment

33. Solutions for reducing CO2 emissions in steel shop

Analyze de possibility of reducing CO2 emissions in steel shop. Identify the source of CO2 emissions and the involved factors. Identify the potential of reducing the emissions and the impact of energy efficiency measures.

Candidate profile:

Specialization: Environment

Chemistry knowledge

Department: Production

34. Study of metallic charge and EAF Process' influences on the Steel Nitrogen content.

Various metallic charge in the electric arc furnace results in having high content of nitrogen. The percentage of each material (sort) can influence the analysis result. We need to identify the proper metallic recipe in order to obtain heats complying with the specification.

Candidate profile:

Specialization: Material Science Engineering, Metallurgy (extractive / processing), Chemical Engineering, Mechanical Systems, Applied Sciences.

Good knowledge of inorganic and oxide material chemistry, physics, mathematics.

Excel, fast learner, availability for heavy industrial environment.

35. Improvement of the rolling mill results having defects origin the Steel casted in Silcotub: Steel categories, calibers, product type.

Identify the main cause for the rejection rate in the rolling mill, specific for each steel category and defect type. Develop and implement action plan for rejection rate reduction in the rolling mill. Each steel grade/category will follow particular plan, depending also by the bar caliber.

Candidate profile:

Specialization: Material science, Engineering, Metallurgy (extractive / processing), Chemistry, Mechanical Systems, Applied Sciences.

Good knowledge of inorganic and oxide material chemistry, physics, mathematics.
Excel, fast learner, availability for heavy industrial environment.

36. Study of Dephosphorization during Primary Steelmaking (EAF)

Develop a methodology/ operative practice for special steel grades regarding the 5P (steel grades with P<=0.010%). The second part of the project could be the economical evaluation of reducing the content of P and Cr using the concept of "decarburization" (the second part is optional according to the achievement of first part).

Candidate profile:

Specialization: Material Science Engineering/ Chemical Engineering
MO Excel, PowerPoint

37. Study of bubbling and desulphurization during Secondary Steelmaking (LF)

Study the bubbling as part of the process of desulphurization during secondary steelmaking (in LF). To make a graph of argon bubbling according to S content requested of each steel category. The impact of bubbling regarding ferroalloy additions.

Candidate profile:

Specialization: Material Science Engineering
Excel, PowerPoint, good analytic skills

38. Conical EBT vs Standard EBT

Perform a detailed analysis of the sand filler quantity, time of tapping, others

Candidate profile:

Specialization: Engineering
Analytical skills, be able to prepare different simulations and be proactive; advanced excel skills

39. Crane Spare Parts Optimization

Spare parts stock reduction and optimization of the new parts list for the new crane.

Candidate profile:

Specialization: Mechanic University / Mechanics
ACAD, Excel, Power Point.

40. Reducing the Gas and Oxygen Consumption

Reducing the consumption for gas and oxygen in the steel shop.

Candidate profile:

Specialization: Mechanic or Energetic University / Mechanics/Fluid Mechanics/Energetics.
ACAD, Excel, Power Point.

41. Optimization of Instrumental Air Usage for the Steel Shop

Reduce the air consumption, solving all the leaks, compressors functioning schedule for energy reduction.

Candidate profile:

Specialization: Mechanic or Energetic University / Mechanics/Fluid Mechanics/Energetics.
ACAD, Excel, Power Point.

Tenaris Silcotub

CAMPINA

Department: Maintenance

42. **Design of the new feeding system for threading lines of polish and pony rods**

Design the feeding table, exit table and finish product collectors for each line; Design the bench for fixing the rod during threading using a similar model; Define the position of existing CNC' according with the dimensions of the tables and the technological needs. Define the process steps (program, logic) together with an automation technician. Cost estimation for manufacturing and implementing the project. Economical evaluation of the investment versus technological advantages.

Candidate profile:

Specialization: Mechanical Engineering / Mechatronics
Good knowledge of Mechanics, Basic electric and automation, industrial design, technical drawing;

Department: Quality

43. **Optimization and improvement of forge area**

Upset area optimization /quality improvement through: usage of graphite, heating temperature effect & raw material consumption.

Candidate profile:

Specialization: Material Science Engineering; Machine Building;
MO (Excel, Word, PowerPoint), ability to interpret technical drawings.

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BUCHAREST

Department: Marketing

44. **Sensitivity analysis to investigate the impact of oil price evolution on the DERC markets**

Thorough analysis of DERC countries in order to try to measure the impact of the oil price variation upon the oil production of each country and implicitly on their drilling activity and pipe consumption.

Candidate profile:

Specialization: Business/Economics / Engineering
Smart (mathematical intelligence); Advanced English; Good command of Excel

45. **Mapping competitor prices across regions and countries in DERC**

Comprehensive analysis of TRADE data across DERC in order to come up with an aggregated picture of the different price levels of our competitors in the different countries of DERC.

Candidate profile:

Specialization: Business/Economics / Engineering
Smart (mathematical intelligence); Advanced English; Good command of Excel

Department: Legal

46. Corporate Keeping

Intro of Tenaris' legal entities in Romania; regular corporate documents;

Candidate profile:

Specialization: Law (University of Bucharest)

English, Spanish or Italian would be a plus

Department: Energy

47. Monitor report of electricity and gas for Romanian market

Collect information from several official sources (internet/press release/media/etc) about electricity and gas markets; Elaborate a database with information regarding electricity and gas market; Elaborate a database of legislation governing the energy/gas markets and create a summary table with the changes occurred in legislation within the past 5 years. Synthesizing information, creating reports on the evolution of market indicators, and identifying trends (indicators to be followed and the form of reports to be defined at the appropriate time)

Candidate profile:

Specialization: Mathematics, Economics, Electrical Engineering, Economical Engineering/

Good Excel, capacity to elaborate reports, ability to understand and interpret laws; synthesis and analytical skills, communication skills in English/Romanian (at least in written).