**WU, XIAN**

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Wu Xuan

**EDUCATION**

**Tianjin University, Tianjin, China | Environmental Engineering (Bachelor)** Sept 2010-Jul 2014

* Related courses: Water Treatment Engineering, Control Engineering of Water Pollution, Principle of Environmental Engineering, Introduction to Water Treatment Technology, Environmental Analysis Monitoring, Sustainable Development ，Engineering Hydrology and Practice of Pollution Control Technology

**McGill University, Montreal, Canada | Environmental Engineering (Master)** Sept 2018-Now

Related courses: Water Quality management, Microbiology for Environmental Engineering, Nanomaterial & the Aquatic Environment, Environmental Engineering Seminar

**RESEARCH EXPERIENCES**

**Supervisor,** Dominic Frigon, McGill University Feb 2019-Now

***Project: Enhance the Performance of Anaerobic Digestion of pre-ozonated Waste Activated Sludge at Low temperature combined with Zero Valent Iron Addition and Two Stage Anaerobic Digestion***

* Determining if ozone pretreatment, two-phase digestion along with ZVI addition can improve the biogas (biomethane) production and volatile suspended solids (VSS) destruction of AD
* Proposing potential optimization scenario for ozone pretreatment by conducting solubilization curves under different conditions
* Configuring two-phase digesters and evaluate the difference between ozonated WAS and digestate

**Team Member,** *Stormtroop* QC (Quality Control) team, Jiangsu Nuclear Power Co., Ltd.,Jun 2016-Mar 2017

***Reducing the Report Time of Total Beta Measurements in the Liquid Effluents***

* Gathering research information of total beta measurements online and from other power stations, then helping with the experiments in the effectiveness checking period and generating reports
* Improving the process by adding citric acid in the sample and finding the optimal sample volume to reduce the sample treatment time by half
* Presenting the results in the company’s QC achievement assessment presentation and wining the first prize

**Team Member,** *Stormtroop* QC team, Jiangsu Nuclear Power Co., Ltd.,Jun 2015-Mar 2016

***Raising the Recovery of Chloride Ion of KOH in IC Tests***

* Gathering research information of IC used in CL- measurements (using KOH as working medium) online and comparing with other power stations, then helping with the experiments in the causative confirmation period as well as report writing
* Achieving the goal by installing a neutralization module (with electrodialysis films) to decrease the pH of the solutions
* Presenting the results in National Electric Power Industry QC Achievement Assessment Presentation held by China International Water & Electric Water Quality Management Association and wining a second-class as well as a prize for excellent presenting

**Graduation Project: *Design of the sewage treatment plant of New Town*** Mar 2014-Jul 2014

* Using biological processes to make the discharges reach grade A of ‘Urban Sewage Treatment Plant Pollutant Discharge Standard’ (GB18918-2002)
* Coordinating with local environmental bureau, and conducting on-site visits and inspection to evaluate industrial and municipal existing facilities
* Performing Internet research and literature review of successful wastewater treatment and management
* Analyzing collected information, generating reports and applying results in the design
* Designing the wastewater treatment systems using CAD, then submitting 7 design drawings

**Coursework of Water Treatment Engineering** Oct 2013-Jan 2014

* Designing wastewater treatment processes according to the given requests: treating 400 tons of water a day, removing the pollutants (suspended solids, phosphorus and Nitrates) and making the discharges reach grade A of the national standards GB18918-2002
* Giving calculation specifications to demonstrate how the sizes of the treatment facilities were calculated
* Giving a CAD drawing to show the arrangement of the facilities

**Coursework of Water Supply and Sewerage Works** Sept 2013-Dem 2013

* Designing the water supply and sewerage systems in a 7-floor building according to the given water users, considering the construal conditions in Tianjin
* Drawing a plan and an axonometric of the designed systems using CAD

**Coursework of Air Pollution Control Engineering** Sept 2013-Dem 2013

* Using Gaussian model to build a chimney solving air problems according to the given data
* Giving calculation specifications to demonstrate how the model was built

**Team Member, Environmental Engineering Research**Jul 2011-Aug 2011

* Communicating with other five universities’ student about the research which aimed at understanding environmental engineering deeper
* Conducting field research at Ocean University of China and collected data from the internet
* Analyzing collected information and contributing in making the report to be distributed to all members

**WORK EXPERIENCES**

**Jiangsu Nuclear Power Co., Ltd., (JNPC) |Chemical Analyst** Oct 2014-May 2017

* Testing the qualities of cooling and giving water in the system and helping with controlling the level of impurities so that the water quality can meet the standards of China’s Electric Power Industry (P DL/T 5452—2012)
* Learning basic knowledge of all the analysis instruments in the laboratory, such as chromatograph instruments (both GC and IC), the atomic absorption spectrometer (AAS) and Spectrophotometer, and training the new employees in chemical and instrumental analysis
* Getting recruited by the *Stormtroop* QC team, and helping improve many of the experiment processes while grasping some quality control knowledge
* Working as league branch secretary and a labor union member in the department, taking care of the employees’ requests and helping them solve problems, meanwhile holding activities for them to attend
* Working as the department’s publicity contact person, writing articles about our outstanding employees and making publicity boards for our department activities
* Abiding the regulations and working closely with other co-workers.

**Shaanxi Culture Industry Investment Holdings (Group) Co., Ltd., |****Sales Assistant** Sept 2012-Oct 2012

***(Part-time)***

* Promoting shows and events, and sold tickets
* Helping in keeping clean and tidy in the theater room

**EXTRA-CURRICULAR ACTIVITIES**

**Volunteer,** Tianjin University Volunteers Association Oct 2010-Oct 2012

* Taking part in the community outreach activities to nursing home
* Organizing activities such as environmental protection campaigns by conducting lectures

**Soprano,** Peiyang Chorus, Tianjin University Oct 2010-Dec 2011

* Coordinating with other singers closely and performing in school’s 2010 New Year’s Party
* Attending rehearsals and helping in selecting pieces for our performances

**Team Leader,** Publicity Committee, Department Anniversary Celebration, Tianjin University Oct 2010-Dec 2010

* Responsible for promoting the event to students and encourage them to participate
* Assisting in planning and implementing the performances and the entire event

**AWARDS**

04/2017 *First Prize*, 2017 JNPC QC achievement assessment presentation

06/2016 *Second Prize*, 2016 National Electric Power Industry QC Achievement Assessment Presentation

06/2016 *Excellent Presentation Award*, 2016 National Electric Power Industry QC Achievement Assessment Presentation

04/2016  *Second Prize,* 2016 JNPC QC achievement assessment presentation

08/2014 *Outstanding Student Leader*, 2014 JNPC new employee orientation

**OTHER SKILLS**

Language Proficiency:

* Excellent reading, listening and speaking ability, good writing ability
* Mandarin Chinese (Native); English (Fluent); Spanish (basic)

Professional Skills:

* Good chemical analysis skill (adept at using advanced analysis instruments)
* Basic quality control skills
* Adept at CAD drawing
* Video editing and Photoshop