**Interview**

Q1. Since the company is committed to use various methods to solve water pollution, you must have unique and profound insights, so what is your opinion about the status quo of water pollution?

A: The self-processing and repairing capacity of the cooling water is strong and it can be treated by simple physical and chemical methods without indroducing other pollutants. The industrial wastewater pollutants are mostly organic materials and the COD (Chemical Oxygen Demand) is high, so it is necessary to adopt biochemical methods in this case, accounting for 95% of all circumstances because aerobic or anaerobic microorganisms could metabolize and degrade organic pollutants in water.

Q2. What kind of method does your company mainly use in water pollution treatment, and which method is the most effective in saving money?

A: The company mainly deals with industrial wastewater. The main methods are biochemical ones using microbes to degrade organic matter, and physicochemical methods including adding various chemical agents such as flocculants and cleaning agents in water system. The cost of chemical methods is very low and it is proven to be very effective and simple.

Q3. If your company uses a chemical to purify the water source, would it have negative effects on water or the human body?

A: Many of the company's drugs are invented by ourselves. They are chemical reagents mainly used to remove corrosives and bacteria which are proven to be harmless to both the water and the humankind.

Q4. Metal ions and rust are main sources of metallic pollution. So what are main hazards of metal corrosion in water circulation system of industrial pipeand solutions? And what about the related solutions?

A: The hazards of metal corrosion are mainly caused by heavy metals. Generally, the treatment of rust and other relevant substances in industrial wastewater could just be done by adding acid, cleaning agents and filtering. Iron ions, not belonging to the source of pollution, is hardly seen in circulating water because circulating water system depends greatly on pureness of its water and substances like rust is never allowed to appear, or the whole system needs to be replaced.

Q5. Do you think that the methods proposed by our team can be improved?

A: Circulating water system must be the core of a process. The cooling medium and the system is very sensitive to temperature, so the cost of using biochemical methods is very high (mainly lies in monitoring various parameters and controlling temperature). But chemical methods are comparatively convenient. The main problems of circulating water stem from substances covered on the surface solid layer, the poor heat exchange capacity caused by the calcium-magnesium scale layer or the algae. We just could add the medicament to kill the algae, increase the solubility of the solid matter, or make the dense scale structure loose. If the situation is serious, we will also adopt the methods like evaporation and concentration to treat solid waste. We actually do not recommend your team use biological methods for cleaning circulating cooling water as the cost is quite large and the application scenarios are limited. Indeed, the cost of rust treatment in the industrial sector is tremendously low. Basically, there is no biological method which would be used to remove iron.

Q6. If you are to design a method for treating corrosion with microorganisms, how would you design it? Can you share with us about the way of thinking and the general ideas for achieving the goals?

A: Currently, the biochemical methods we use are mainly for coping with industrial wastewater without additional operations at the molecular level. We can directly add microbes in log phase to the sewage treatment tank, and slightly control its environmental temperature to improve its capacity in degradation. The value of COD can be measured in the process. Since organic pollutants are constantly generated, the microorganisms are not needed to be extracted or killed and they could metabolize the pollutants and transform into water and CO2 all the time. For wastewater treatment, the things we need to do is just controlling temperature and adding more microbes.