Applied Program: Thermal-Fluid Sciences

When I proceed to write this Personal Statement, I repeatedly ask myself two questions. The first is, “what is the ultimate motive for my pursuing an advanced degree program in thermal fluid sciences in a country far away from my own?”  To answer this question, it necessarily implies that at the age of 30, I, a female engineer, have to relinquish my present career with its stable income, give up my comfortable way of life and bid farewell to my family members and long-time friends. Yet, my belief is that all my efforts and sacrifices will pay off, because making such a choice is the best way to fulfill my ideal of becoming an accomplished scientist in the field of Chinese mechanical engineering. My six-year-long work experience has removed much of my rashness. Instead of wearing away my passion for questing for self-actualization and fulfillment, it has made me increasingly mature in thought. I am soberly aware of what I am doing, what I want to do and what I can do and this sober self-knowledge has all the more reinforced my courage and determination to pursue my vision and destiny.

The second question I pose to myself is: “In the field of mechanical engineering which is essentially male-dominated, what is my comparative advantage as an applicant who graduated from XX University of Commerce, a university which is not as prestigious as, say, XX University?“  The answer to this question is an extended one, which is to be found in the following part of my Personal Statement.

The achievement of a top academic performance in my 4-year undergraduate program in the Department of Refrigeration Engineering is the solid foundation and the starting-point for my present application for a more advanced degree program in mechanical engineering. My strong academic interest, combined with dedicated efforts to coursework and effective learning strategies, rewarded me with a very high GPA (3.46), ranking first in a class of 32 students. Throughout the four years, I won almost all categories of scholarships and honors，soliciting admiration from the male students who comprised 80% of the entire population of the class.

I believe that, as far as my application is concerned, my greatest advantage lies in my 6-year rich experience of working at the forefront of large-scale projects, involved in the testing, maintenance, and spare parts planning for refrigeration and thermal conduction machinery.  When I graduated cum laude from my undergraduate program in 1997, I was given the privilege of embarking on a Master’s program waived of entrance examination. But considering the fact that the second-phase project of XX Nuclear Power Plant, one of China’s key national projects at that time, called for a large number of talents specializing in refrigeration engineering, I decided to give up the Master’s program and set to work on the installation and testing of the Power Plant’s No. 1 generating unit.

For three years from 1997 to 2000，whether in cold winter or in the scorching summer, I worked indefatigably, leaving my footprints at one construction site after another consisting of sets of large-scale refrigerating units. The on-the-spot installation and debugging helped deepen my understanding of different types of machinery, especially the configuration and the working principles of refrigerating equipment. At the same time, by studying a large amount of technical literature concerning advanced foreign equipment, I compiled detailed and comprehensive standards equipment maintenance.

Since 2000, I have been engaged in the preparing and planning of the spare parts for equipment maintenance. Even though I have no relevant and mature experiences of spare parts management to borrow from for a typical nuclear power plant, I have done much creative and fundamental work by preparing a spare-parts database for all the plant’s 600 equipment systems. I launched and organized the implementation of the coding project for more than 60000 spare parts and completed the spare-parts plan for the first major equipment replacement for the No. 1 generating unit in the plant’s phase-II construction. Busy as I have been, I have never ceased to make efforts to improve my professional knowledge and expertise. I have been to XX and elsewhere to attend seminars, workshops and training programs where I exchanged experiences with XX experts from Britain, South Africa and Eastern Europe concerning the problems of equipment maintenance of the power plant. This allowed me to be exposed to the cutting-edge knowledge and technology in my area of specialization and to constantly enhance my professional standards.

One important product from my 6-year work experience is my development of sound teamwork and a rigorous scientific research attitude. We know that for a large-scale project like the XX Nuclear Power Plant’s phase-II construction, it is absolutely impossible for any single individual to realize the integration of the power networks and the subsequent power generation. The job that I have been responsible for is directly related to the issue of project safety, especially that of nuclear safety. This requires me to be constantly on the alert, be meticulous to the minutest detail and have a strong sense of responsibility. I believe that such a kind of mentality as I have developed will be very conducive to my future study and academic research.

As I have described in the foregoing text, a solid professional foundation, precious work experience, strong team spirit and a rigorous scientific attitude are what makes me unique and competitive in my present application. It is precisely based on those factors that I am convinced that I will fruitfully complete my proposed program and have an even more fruitful career in the future.

University of XX, which is ranked 25 in mechanical engineering, is exactly where I would like to undertake my study. I wish to concentrate on Thermal-Fluid Sciences, with special stress on new refrigerating and air-conditioning technology and on modern ecologically-friendly energy-saving technology. I believe that the University of XX will give the best education I can expect in mechanical engineering that may facilitate greater achievements in my future career.