**Applied Program: Mechanical Engineering**

I have constantly reflected upon the meaning of life and have attempted at painstaking quests for an ultimate answer to this metaphysical question. However, I believe that I have now uncovered a truthful, albeit realistic, answer to this question. The answer is derived from my father, who, as a professor at the Department of Thermal Energy of xxxxxxx University, embodies the spirit of conscientious and assiduous work as well as relentless and persist research. Therefore, when I chose Heat Supply and Air Conditioning and Gas Engineering as my undergraduate degree program and as my lifelong dedication, it dawned on me that, for me, the value of life dwells not only in contributing my professional knowledge to this society but also in transforming at least a portion of this society with my professional knowledge and dedicated efforts.

The bygone millennium is a century of incredible scientific and technological progress in human history. While enjoying the civilization created by technology, mankind was also experiencing various forms of "retaliation" and punishment--- population explosion, energy exhaustion, soil erosion, deterioration of water quality, global warning and, in China, sandstorms. Nevertheless, as I delved deeper into my undergraduate course work at xxxxxx University (one of the most prestigious universities in China), my trepidation of all those actual and potential disasters was significantly reduced. By studying many courses closely related to human existence and human development, I came to understand that man's efforts in environmental science could somehow prevent the occurrence of those catastrophes, or at least reduce their severity. Among numerous courses, Man and Heat Surroundings, Energy-Saving Technology in Air Conditioning, VRV Air Conditioning Systems Engineering, and Cold-Bearing Technics of Ice in Air Conditioning especially fascinated me. They made me seriously contemplate on the problem of increased energy exhaustion and the ensuing pressure of environmental protection. I also realized that the application of the technology incorporated in those subjects would effectively satisfy people's desire to improve their living and working conditions. My enthusiastic motivations, together with my commitment and hard efforts devoted to course work, enabled me to distinguish from my classmates, ranking me among the top 10 among 120 students of my grade. Most importantly, my undergraduate studies helped me develop an aptitude to undertake intellectual endeavors independently and actively and to acquire an effective methodology of academic inquiry.

In 1999, I participated in the designing project of the air conditioning system inside the Stone-Gate Station of the xxxx No. 2 Subway Network. This project provided me with an ideal opportunity to apply my solid professional knowledge and my tremendous creative potential. In that portion of work that I was in charge of, I inferred the precise size of the windpipe by a pinpoint calculation of wind volume. By employing different modes of pipelining and the introduction of static pressure boxes and other auxiliary equipment, I realized the maximum comfortability by utilizing limited space.

Upon graduation, I found employment with the Tsinghua TongFang Company Ltd., the leading enterprise in air conditioning design in China. During the past two years, I took part in three major projects and I acted as director in one of them. As project manager of the Automatic-Control System of Urban Construction Archives Building, I was responsible for the initial negotiation with the client, supervising the equipment installation, independently editing the software of the control system, post-construction software commissioning, the final project evaluation, and writing documents of project completion. The successful execution of every step in the project enabled me to further accumulate knowledge, to expand my experience and to increase my confidence. At present, the stage II and stage III projects of CCTV's Air-Conditioning System Design that I am in charge of are under way. I experience an unprecedented sense of achievement when I see the installed equipment start to operate smoothly, various indexes meet the designing standards, and the level of comfortability of the performing and broadcasting studios improve.

Nevertheless, the value of life that I have been pursuing is far from being fulfilled. Energy and environment still remain the paramount problems confronting mankind. The question of how to increase the degree of comfortability by exploiting limited energy without endangering the environment of man's existence still awaits proper solution. With the development of architectural environment, alarming increase of construction space and the corresponding increase in the necessary heating and cooling volume, it becomes inevitable that the already limited quantity of energy and natural resources will be excessively exhausted. As a professional in thermal energy, I feel that I have serious obligation and responsibility to perform.

Energy conservation in architectural design is a systematic project. The primary task in the study of thermal energy is to provide effective technical support and technological means to facilitate the development and engineering application of highly-efficient energy-saving equipment, to optimize specialized systems design, and to ensure productive execution and operation of management. In this regard, advanced countries in the West undoubtedly possess greater advantages over China, whether in the degree of concern devoted to the relevant issues or in the level of sophisticated technology. The purpose of my planning to seek an advanced degree program in the United States is to become equipped with necessary expertise to renovate the relatively backward conventional equipment and systems by applying the knowledge of new technology that I will acquire in my future studies, to develop new facilities and new systems, and to evaluate the effect of application measures by means of new technology. I would like to concentrate my prospective degree programs on the following areas: (1) how to design rationalized air-conditioning system that yields greater degree of comfortability, with special consideration of the architectural structure of a building; (2) how to fulfill the energy-saving purpose by applying the latest research findings in heat transmission and fluid mechanics to the heat-exchange process in the development of air-conditioning equipment or by frequency modification and wind volume modification; (3) how to develop new energy sources with special attention to environmental factors, without harming the atmosphere or increasing pollution.

With the accumulation and expansion of my experience of life, I have suddenly become aware that human existence itself is a fundamental form of the meaning of life. I believe that what I have been doing and what I will be involved in doing shall become a process whereby I will achieve the sublimation of the value of my life. I feel proud that I have chosen such a way of being serviceable to the society and to the harmonious co-existence between man and the environment.