

Dear American Friends of Arts & Metiers ParisTech,

I hereby, LE GLOANEC Erwan, give my full authorization to publish the content of this letter on your website in recognessence of the financial support that you have provided me with.

Full Name: Le Gloanec Erwan

Date: 11<sup>th</sup> of January 2012

Signature



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1. Name of student, background, professional aspirations (1 paragraph, 5 lines)

First Name: Erwan

Last Name: Le Gloanec

I have been a student for 2 years at the school Arts et Métiers ParisTech prior to this internship. I still have one year to complete my studies and obtain the Engineering diploma. At the same time, during this last year, I will prepare a master degree specialized into Mechanic and Energetic. Thus, I am concerned on how to provide enough energy to our massive consumer society in the next few years and finding sustainable solutions to achieve this goal.

2. Please tell us how you were able to get your internship, and the date and length of your stay (1 paragraph, 5 lines)

I obtained this internship thanks to relatives who work in the same company. They helped me to apply for it since I was not really familiar with overseas work experience. I arrived in the United States on the 12<sup>th</sup> of July 2011 and I will leave the country on the 23<sup>rd</sup> of January 2012: thus, this is a little bit more than a six month stay.

3. Please present the company or university where you interned and the objectives of your internship (1 paragraph, 10 lines), and why you were excited to work there. (1 paragraph, 10 lines)

I have done my internship at Solar Turbines, located in San Diego at the Southern part of California. As its name partly suggests, Solar Turbines is a manufacturer of gas turbine engines. They sell them all around the planet since gas turbines can provide a high power and a great efficiency at high speeds, which is not the case of regular spark ignition engines. Solar proposes three different types of packages. The word "package" refers to the engine itself and the associated driven equipment: both of them are maintained together by a massive structure, the skid. The first kind of package is called a Generator set: it means the turbine drives a generator in order to produce electricity. The second one is a Compressor set: in that case, the turbine drives a Solar compressor either for gas storage purpose or to maintain the required pressure inside a pipeline. The last one is a Mechanical drive: the turbine drives either a pump or a compressor which is not a Solar one. The San Diego facility headquarters most of the engineering and the manufacturing processes proper to each project.

Working at Solar Turbines represented for me great opportunity. Indeed, the complexity of gas turbine engines raises many issues that Solar has to take into account prior to ship them to their customers. Understanding how a gas turbine works represents the practical application of what we learn at school: mechanical engineering, fluid mechanics, heat transfer, electrical transfer of information... I was hired as an intern to work in the business management department. Their role is to lead the elaboration of the project as described in the purchase order, signed by both Solar and the customer, until the final delivery on site. Setting up the different packages to make them physically run is up to another Solar team. I have worked on one specific project with both the project manager and the engineering team to learn and understand Solar's standard operating procedure.

4. Please tell us which expenses will be covered by the funds provided by American Friends of Arts et Metiers (1 paragraph, 5 lines)

The funds provided by AFAM will essentially cover the cost of my J1 Visa (around 1200€) that I applied for in order to come and work in the United States.

5. Please summarize your internship, how you achieved the company/university's objectives (1 paragraph, 5 lines), as well as your own personal goals and lessons from this experience (1 paragraph, 5 lines), and finally how this impacted your professional aspirations (1 paragraph, 5 lines).

This internship is entitled as an "Assistant Engineer" one: this is exactly the position I have had so far. I have worked on one specific project which consists in setting up four generator sets offshore in Northern Sea. My role is to help both the project manager and project engineer in their various daily tasks: taking care of the lines of communications between Solar and the customer, writing a performance data report as well as providing to the customer a monthly report about the evolution of the project. Thus, I have had the opportunity to be part of the procedure followed by Solar to elaborate an entire package, taking into account the customer's requests. This was the main objective agreed by both Solar and ENSAM at the moment of filling out the internship agreement form.

This experience has been a tremendous one. The main point that I gained is certainly the self-confidence. Indeed, I often have to go and look for the information I need: this means I have to either go and see the person who is liable to answer me or make the required phone calls. It doesn't seem to be that hard but it involves the following things: being able to quickly identify who I am, in which department I am working, which project I am talking about and the reason(s) of my request(s). When I compared how I did this exercise at the beginning and how I am doing it right now, there is truly an evolution in terms of ease, especially in my language skills.

There is no doubt that this experience will enhance my application for a future job. I will be really willing to work in a foreign country. Indeed, I am no longer afraid of going to another country to apply my knowledge since I have already realized (at the moment I am writing down those lines, I only have a couple of days left to complete this internship) this kind of experience. Furthermore, Solar works for the power generation industry which is likely to be crucial in the next few years: this first step here will open me other opportunities in this sector that I wouldn't have had otherwise.