

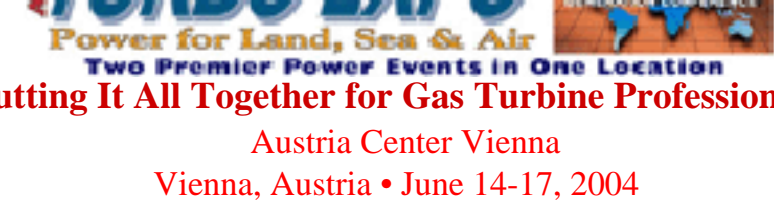
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### SoftInWay through the prizm of events

#### AxSTREAM™ on the Global Gas Turbine Event

We invite you to meet us at



**Putting It All Together for Gas Turbine Professionals**  
Austria Center Vienna  
Vienna, Austria • June 14-17, 2004

Plan to stop by our booth #136

[Click here](#) to get more info on this show.

Come and see our exciting solutions for digital prototyping and turbomachinery design! Our products such as **AxSTREAM™**, **AxPLAN™** and others will help you to increase efficiency of your turbines and other power generating equipment, improve performance on "as designed" and "off-design" points of operation and save time and money by doing so.

### Mirror of SoftInWay's Innovations

#### AxSTREAM™ Expands Its Capabilities in Gas Turbines Design

Meeting and anticipating industry requirements, SoftInWay continues futher development and refinement of our flagship product **AxSTREAM™** - a professional tool for design and optimization of axial turbines.

From now on **AxSTREAM™** will provide the users with new option that makes possible rapidly evaluate cooling influence on turbine/section/ stage efficiency. This new capability affords more accurate evaluation of turbine flow path by including thermodynamic and flow dynamics parameters related to cooling.

[More>>](#)

### Openings in SoftInWay

We currently invite you to explore the vacancies that the links below are leading to:

- [CAE Software Developer](#)
- [Project Manager, Engineering Consulting](#)
- [Sales Engineer/Project Manager](#)

You will join a strategically focused and highly motivated team involved in Scientific, Mechanical Engineering, Design Consulting and Software Development. You also will have an opportunity to work on multiple projects in a flexible, friendly environment.

### Latest Press Releases

#### Design of New 1500 MW Steam Turbine with the Help of AxSTREAM™

**AxSTREAM™ - a professional tool for rapid axial turbine flow path design has been selected as a design tool by VNIAM for design feasibility studies of the large-scale steam turbine project in Russia.**

**AxSTREAM™** has been developed and refined through a rigorous process that systematically incorporates the in-depth domain knowledge, vast experience of gas/steam turbines design and manufacturing, reliable test data and the theoretical advances.

[More>>](#)

### SoftInWay's Online Presentation

#### An opportunity to view AxSTREAM™ capabilities in Turbine Design at a glance!

The presentation gives an overview of **AxSTREAM™** software suite capabilities in axial turbines conceptual design and optimization. This presentation features viewer-oriented approach providing a whole specter of unique **AxSTREAM™** design and optimization functions from conception to 3D model including the program's theoretical basics that allow to quicker comprehend the core of the program.

[View >>](#)

### Welcome to our Science Club!

#### New Mechanical Engineering Papers!

We will be glad to publicize your papers in mechanical engineering in our Science Club. Please submit your articles to [lm@softinway.com](mailto:lm@softinway.com)



Latest:  
**L. Moroz and Y. Govorushchenko**  
**OPTIMIZATION OF MULTISTAGE AXIAL GAS TURBINE WITH AXSTREAM™ USING DOE METHODOLOGY**

[More articles >>](#)

### Latest Press Releases

#### AxSTREAM™ - a professional tool for rapid axial turbine flow path design has been selected as a design tool by VNIAM

FOR IMMEDIATE RELEASE

BURLINGTON, Massachusetts, April 26, 2004

SoftInWay, Inc., developer of **AxSTREAM™** - a professional tool for rapid axial turbine flow path design, has been selected as a supplier of this powerful software suite for the large-scale steam turbine project in Russia.

VNIAM - All-Russian Research, Planning and Design Institute for Nuclear Power Engineering - has chosen **AxSTREAM™** software suite for engineering feasibility studies of the design project of high-speed 1500 MW steam turbine. This turbine has a combined high-low pressure section with water separation in between high and low pressure parts. "We are very pleased that VNIAM has selected **AxSTREAM™**," says Dr. Moroz, President and CEO of SoftInWay. - It reflects **AxSTREAM™** effectiveness and reliability. Our tool is not only an advanced solution for design of large axial steam turbines, but it also has a very high return-on-investment value". Once completed, the machine developed by VNIAM is expected to be the most advanced steam turbine available today.

Latest release of **AxSTREAM™** encompasses the complete engineering process of gas/steam axial turbine flow path conceptual design and optimization, and delivers an advanced engineering desktop solution for use in turbomachinery industry. This software tool empowers designers to apply a concurrent development approach while solving coupled problems of performance, reliability, operating life, and low-cost design process.

**About VNIAM.** State enterprise VNIAM headquartered in Moscow, Russia, is a world-known research and design institution predominantly dedicated to design of thermo-mechanical equipment of nuclear power plants. The products based on this institute's solutions are deployed globally and feature state-of-the-art quality. The institute carries out the development of new products and equipment: autonomous nuclear power plant, high-speed large steam turbine, steam generator for nuclear power plant, stationary and mobile steam boilers and hot water heaters, various capacity heat exchangers, etc.

### Mirror of SoftInWay's Innovations

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Meeting and anticipating industry requirements, SoftInWay continues futher development and refinement of our flagship product **AxSTREAM™** - a professional tool for design and optimization of axial turbines.

From now on **AxSTREAM™** will provide the users with new option that makes possible rapidly evaluate cooling influence on turbine/section/ stage efficiency. This new capability affords more accurate evaluation of turbine flow path by including thermodynamic and flow dynamics parameters related to cooling. **AxSTREAM™** supports a multidisciplinary approach to the flow path analysis and optimization, and new feature expands designer's capabilities during all phases of design providing additional information.

In particular, during flow path design it will be possible to:

- Determine required cooling system type based on initial gas temperature and coefficient of temperature ripple at turbine inlet.
- Evaluate gas-to-blade and blade-to-cooling air factors with empiric correlations, find blades cooling intensity coefficients, determine required air mass flow rate taking into account blade materials and stress margin of safety.
- Include in stage reverse calculation gas temperature decrease and cooling air injection in flow path through blades perforation and axial gaps. Stage efficiency calculation will also include cooling air injection coefficients.
- Carry out optimization of chords and blades number in crowns (S1) taking into account additional cooling flow.
- Carry out stage optimization (S2) taking into account additional cooling flow.

On the phase of ID analysis engineers can now:

- Determine gas-to-nozzles/blades heat transfer coefficient with empiric correlations.
- Conduct flow path performance calculation including influence of buckets cooling factors.
- Evaluate the flow path components stress-strain state at the temperatures calculated with regard to cooling effect.

While doing blades profiling, now one can determine heat transfer coefficient distribution along profile's contour on the basis of streamline and heat boundary layer calculations. In particular, iterative process of nozzle/blade shape design/optimization assumes recalculation of through-blade flow passage that defines velocity profile at the pressure/suction surfaces. Any blade shape's change initiates a corresponding recalculation. This allows to simultaneously predict viscous and thermal conditions at the blade surfaces resting on boundary layer approach that includes friction losses and heat transfer intensity (Nu number/heat transfer coefficient).

With this new capability **AxSTREAM™** generates a full set of input data required for boundary layer prediction, provides designer with heat transfer coefficient and adiabatic temperature distributions along profile's contour for temperature calculations of the cooled blade.

New feature increases accuracy of the solutions obtained with **AxSTREAM™** and expands designer capabilities in gas turbine flow path optimization.

### Openings in SoftInWay

Welcome to join SoftInWay Incorporate! We invite you to explore the vacancies presented below:

#### CAE Software Developer

This individual should have experience in development of complex engineering software projects and a strong background in CAE tools. Excellent understanding of FEA and / or CFD methods and issues. It is essential that the individual has a strong desire to learn and explore new technologies and is able to demonstrate good problem solving skills.

- Requirements:
- B.Sc., or M.Sc., or Ph.D. in Mechanical Engineering, Applied Math or Physics with respectfully 5+, or 3+ , or 0-1 years of experience in engineering software development (C, C++, FORTRAN);
  - Thorough knowledge of FEA and / or CFD methods;
  - Hands on experience with at least one of the following tools: ANSYS, MSC.Software, ABAQUS, I-Deas, CATIA, Fluent, or CFX. Experience with SolidWorks and / or Pro/E is a plus.

#### Project Manager, Engineering Consulting

This individual will be responsible for all-round technical preparation and evaluation of project proposals in FEA-based Model Transfer, Stress-Strain areas. Recommending improvements, the project's technical issues coordination including problems' review, sophisticated detail description, precise boundary conditions evaluation, and gathering and analysis of other data required for providing further non-stop development process.

Also responsible for building and maintaining development schedules and fulfilling project deliverables on time, from inception to client sign-off. Beyond this, the candidate needs to have very sharp analytical skills, which s/he will use through the project life cycle, including detailed pre-development proposal analysis, projects feasibility estimation, and user requirements analysis.

Requirements:

- Masters Degree or Bachelors in Mechanical Engineering with significant related experience at Power Generation Machinery oriented companies like GE, Pratt & Whitney, Rolls-Royce, Alstom. Computed Science Degree is desirable.
- 5+ years of complex Mechanical Engineering project management, engineering application development, design, and implementation experience.
- Experience in FEA-contained packages' implementation like ANSYS and/or similar toolkits is required.
- Principle knowledge in CFD, Heat Transfer, Stress-Strain, Machine Design is extremely appreciated.
- Must be strongly focused and extremely organized.
- Proven experience in writing specifications, quality assurance, project complexity, labor effort estimation, and risk analysis skills.
- Exceptional oral and written communications skills are essential.
- PMI certification is a plus.

#### Sales Engineer/Project Manager

The essential job function of this person is business development and sales of engineering/software development consulting services including:

- forecast development to achieve national sales goals,
- developing and implementing a strategic sales plan to achieve national sales goals;
- identify, close and maintain key accounts;
- provide information to marketing to improve products and profitability;
- monitor and assess major competitors' activities and products.

The person will perform sales work inside and outside in support of SoftInWay's engineering services for diverse industries including Aerospace, Power Generation, Automotive, Energy, Petrochemical, Utilities, Gas, etc. He/She will prepare proposals or service contracts for SoftInWay's engineering services with deep understanding of customer requirements and company's team Design and Engineering abilities in FEA-based CFD, Heat Transfer, and Structural applications development. Coordinate and schedule marketing activity. Serve as Project Manager for various projects, both temporary and ongoing.

Requirements:

- Minimum 4 year Degree in Mechanical Engineering or related areas with significant related experience at Power Generation Machinery oriented companies like GE, Pratt & Whitney, Rolls-Royce, Alstom.
- 5 - 8 years experience of surpassing sales quotas in selling consulting services to C-level executives in engineering and scientific.
- Principle knowledge in CFD, Heat Transfer, Stress-Strain, Machine Design, CAD/CAE, and Visualization is appreciated. Knowledge of MS Office and MS Project is a plus.
- Excellent prospecting and presentation skills .
- Must be strongly focused and extremely organized.
- Exceptional oral and written communications skills are essential.

### About SoftInWay Corporation

**SoftInWay, Inc.** is an engineering company headquartered in Burlington, Massachusetts, USA. Company has a sales office in Scottsdale, Arizona, USA. Company's mission is to serve international high technology community by providing high quality engineering services and software products in the area of design and modeling of turbo-, thermo- and rotating machinery; and thermal-, structural- and fluidic analyses. Company uses its proprietary technologies, and industry standard CFD and FEA tools to address design issues at the earliest possible stage, maximize engineering productivity and increase efficiency of new and retrofitted equipment. Company collaboration with academia, industry, and customers around the world has led to a reputation for constant innovation in the complete design-to-manufacture process.

For more information, visit <http://www.softinway.com> or call 781-685-4942.

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