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Transsolar KlimaEngineering

25 May 2021
Position Announcement

HVAC engineer with a passion for holistic indoor environment design

Transsolar KlimaEngineering is an international climate engineering firm advising architects and clients on energy and climate design for construction projects of all scales all over the world. We are a group of engineers and architects who develop high-performance building concepts, validate them using simulation, hand calculations, and physical testing, and advise design teams on their implementation.

We are seeking a talented, highly motivated engineer for our New York team with 3-5 years of experience in design of mechanical (HVAC) systems who is interested in shifting into holistic design and climate engineering. If you've learned the ins and outs of delivering high-performance mechanical systems, but find you have limited opportunity to impact the rest of building performance, especially façade design and architectural concepts, then this position is for you!

At Transsolar you will apply your HVAC expertise while broadening your knowledge and impact. This position targets an engineer who contributes deep background in conceptual development of HVAC design to the team's daily work, while also working on and eventually leading holistic climate concept development and analysis.

Transsolar is involved in projects ranging from small schools in developing countries to stadia or entire cities. This diverse work shares a common focus on creating exceptional, people-focused indoor and outdoor spaces with a positive environmental impact. For more information about Transsolar and our international portfolio of high-impact projects, please visit our website at www.transsolar.com

What are we looking for?

We're looking for a team member with these qualifications:

Required

- Bachelor of Science in engineering (typically mechanical engineering) or applied science, covering key engineering science basics including fundamental heat transfer, thermodynamics, and fluid mechanics
- 3-5 years of practical experience in high-performance commercial HVAC system design

Preferred (in approximate order of priority)

- M.S. with a focus on building applications and indoor and outdoor human comfort
- Experience acting as an external consultant advisor in state and utility energy efficiency programs
- Experience with conventional whole-building energy simulation and ASHRAE 90.1 baseline modeling
- Experience with physical testing of engineered systems: mock-up/prototype construction, instrumentation, measurement, and control
- Excellent oral and written communication skills
- Ability to develop and articulate engineering problems beginning with fundamental physics and use both analytical and computational methods to analyze unique and complex building physics and building systems
- Passion and creative energy required to collaborate with world-class architectural design teams
- Education/professional experience with current and advanced architectural technologies (e.g. building envelope)
- Experience collaborating and communicating in the early stages of an architectural design process with both technical and non-technical audiences

Responsibilities at Transsolar

We work as teams in an engineering studio environment. Daily work is diverse, and your responsibilities will vary and grow according to your interest and experience (and from project to project), but are expected to include:

- Development of climate and energy concepts in response to local climate, site, architectural, and programmatic requirements, with particular emphasis on mechanical design concepts and key performance requirements for mechanical design concepts. You will focus on design and analysis of a few projects at a time while serving as an expert team resource for projects you are less involved n personally.
- Provide energy efficiency consulting advice to projects participating in state and utility energy efficiency incentive programs. Opportunity to help grow Transsolar's practice in this area.
- Testing and validation of concepts, including comfort and energy analysis, via thermal simulation (using TRNSYS, but prior TRNSYS experience is not required) or physical testing via mock-up or field testing where appropriate
- Review of project design documentation, especially architectural and mechanical drawings and specifications, to ensure successful realization of the climate concepts
- Engineering analysis and tool development via hand calculation, spreadsheet analysis, and contemporary scripting tools (such Python, Javascript, or Grasshopper)
- Internal coordination with other team members, synthesis, and communication of overall analysis results and design recommendations
- Graphical representation of climate concepts and complex engineering analysis
- Writing reports and correspondence
- Participation in meetings and design charettes
- Collaboration with German Transsolar offices (in English!)
- Domestic and international travel to project meetings and sites
- Public speaking and development of your professional network to broaden Transsolar's reach

How to apply

Interested applicants may submit their resume and cover letter via email to jobs@transsolar.com.

In your cover letter please answer (maximum 150 words each):

- Why are you interested in Transsolar and the right fit for this position? Be specific.
- What is the most challenging HVAC design you've been involved in? How did you help address the challenge?
- What is your potential start date?
- Whether you will now or in the future require visa sponsorship for employment at Transsolar.

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