

COMPUTATIONAL FLUID DYNAMICS - CFD

CONSULTANCY & SERVICES



Centre for **C**omputational **Tech**nologies

ABOUT CCTECH



Established in 2006 by alumni of IIT Bombay, our motive is to establish a knowledge centric organization in the field of computational engineering. Innovations and creative solutions being the main driving force, everyone at CCTech strives for new challenges from industry.

Over the last few years, we have created a brand name in CFD and CAD development, training and consultancy services. Customer centric philosophy with no compromise on customer satisfaction, has made CCTech as one of the best choice for industry.

CCTech team comprises of industry professionals from leading CAE companies like ANSYS FLUENT, Geometric Software and Cognizant. CCTech has an excellent base of advisory board, principal consultants and technologists from industry and academia. CCTech executes open-ended industrial and research projects in association with educational institutes, industries and research establishments to explore new horizons. For more details, log on to our website www.cctech.co.in

○ CONSULTANCY SERVICES >

CCTech has unique range of consultancy offerings in the domain of CFD analysis. Our in-house team of consultants and associates are experts in respective fields. The wide range of experience and knowledge brings a level of quality to consultancy projects that is unsurpassed in the sector. We at CCTech always strive to get the best CFD results which are close to reality. From using commercial tools to writing specific user functions or codes for specialized application, we have end-to-end solution services in the domain of virtual simulations. Every CFD software available in the market has established standards in specific segments. We have expertise on all frontline CFD software packages in the market which makes us stand out from the rest.

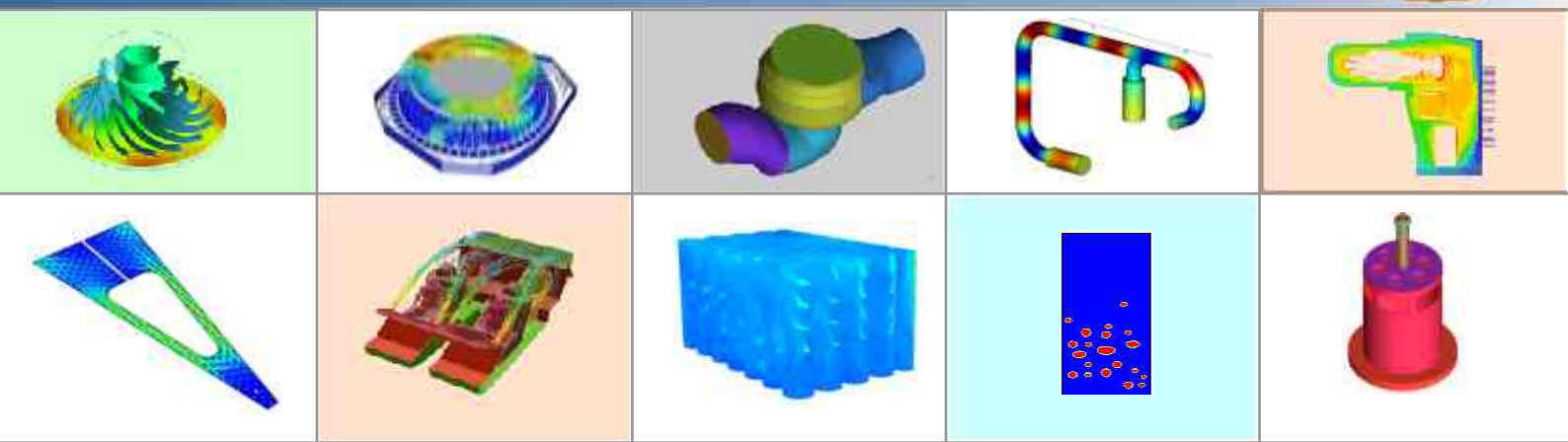
○ TRAINING SERVICES >

CCTech's CFD training is designed to satisfy different training needs of CFD application engineers. Be it learning the fundamentals of CFD or developing expertise on CFD software, we have a course to fulfill the requirement. We offer three levels of CFD courses viz. Introductory, Intermediate and Advanced. For beginner in CFD with very little or no knowledge of CFD or a CFD practitioner, we have courses suitable for varied individual needs.

○ TECHNICAL STAFFING & MENTORING SERVICES >

Having the right resources on board is imperative to project and organizational success. Supplementing your team with top notch contract professionals can dramatically increase productivity and help to take new business challenges. We specialize in providing the best staffing solutions to your exact business needs. Whether your need is for temporary staffing, temporary to hire staffing, direct hire placements, or payroll services, CCTech can provide a solution for you. We have staffing professionals who are experienced and have worked with various companies to meet their needs for skilled employees.

CFD CONSULTANCY SERVICES



Solutions for Industry >

Over the last few decades, CFD has become a frontline tool for virtual simulations. Be it the conceptual design of product or just a performance prediction, CFD not only gives the qualitative data but very exact quantitative predictions. CFD tools and techniques are extensively validated with experimental and analytical results allowing designers to reduce the experimental cost and efforts.

We at CCTech always endeavor to get the best CFD results which are close to reality. We have unique range of domain and software expertise. Ranging from simple flow analysis to complex multiphase simulation, CFD engineers at CCTech follow the best industry standards.

SOFTWARE EXPERTISE >

- CAD Modeling : SolidWorks, CATIA, UG, ProE
- CAD Cleanup and Repair : ANSA, ICEM-CFD
- Meshing : ICEM-CFD, GAMBIT, Tgrid, Hypermesh
- Solver : ANSYS, ANSYS FLUENT, ANSYS CFX, STAR CD, STAR CCM+, CFdesign

DOMAIN EXPERTISE >

- CAD Repair for Meshing
- Multiblock Hexa and tet/prism meshing
- Moving and deforming mesh
- Turbulence Modeling
- Multiphase Modeling
- Combustion and Reaction Modeling
- Solidification and melting
- Conjugate heat transfer

< AEROSPACE

- Wing Design and Optimization
- External Aerodynamics
- Turbine Analysis
- HVAC and Passenger Comfort

AUTOMOBILE >

- External Aerodynamics
- HVAC and Cabin Comfort
- IC Engine Combustion
- Underhood Thermal Management

< HVAC

- Duct Design and Thermal Management
- Air Contamination
- Species Concentration
- Natural Ventilation

TURBO MACHINERY >

- Centrifugal Pumps and Compressors
- Axial Pumps and Compressors
- Blade Design and Performance Prediction
- Cavitation

< FLOW CONTROL SYSTEMS

- Ball, Butterfly and Globe Valves
- Valve Sizing and C_v Calculations
- Cavitation
- Excess Flow Control Valves

CHEMICAL & PROCESS INDUSTRY >

- Fluidized Bed
- Species Mixing and Reaction
- Distillation Columns
- Cyclone Separators

< HEAT EXCHANGER

- Plate Heat Exchanger (PHEs)
- Shell and Tube Heat Exchanger
- Heat Augmentation and Performance

CONJUGATE HEAT TRANSFER (CHT) >

- Natural and Force Circulation
- Radiative Heat Transfer
- Conduction

CFD CORPORATE SERVICES



Partial List of Clients >



GE Healthcare

TACO IPD

Altair

TACO



IndianOil

TRANTRER

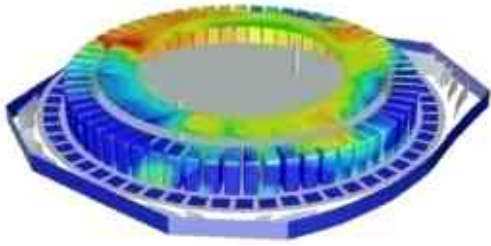
cfdesign[®]
Upfront CFD

ThyssenKrup

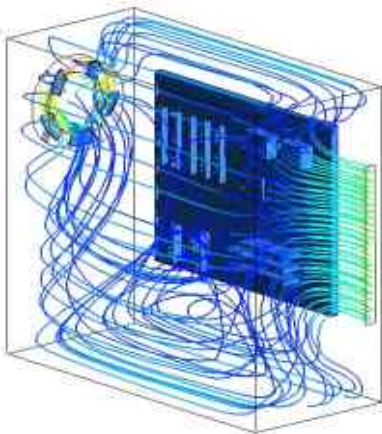


Dembla





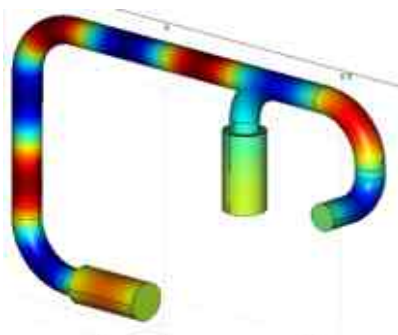
HVAC of Server Room



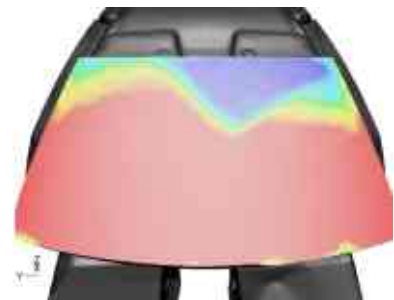
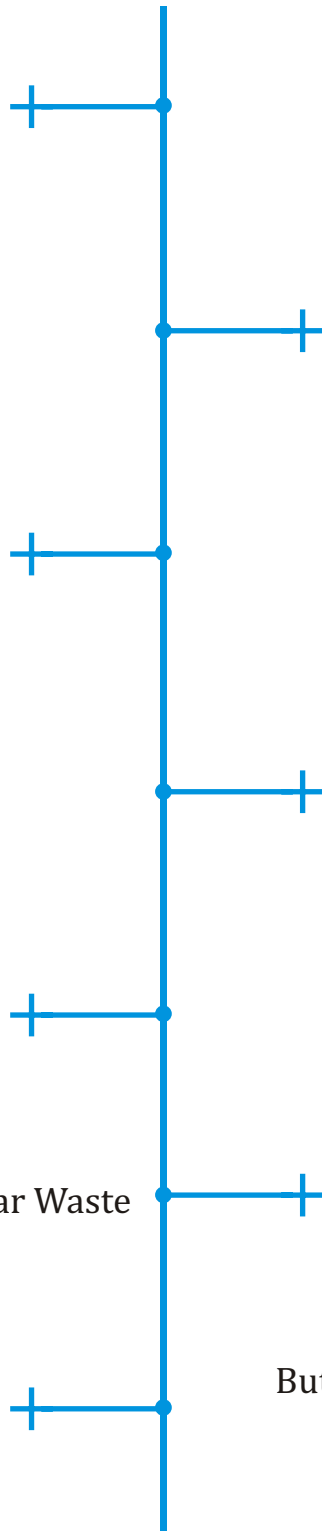
Computer Cabinet Cooling



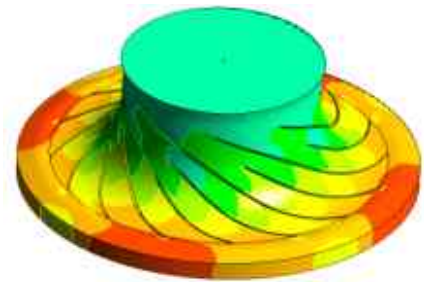
Hydrogen Concentration in Nuclear Waste



Pressure Wave Acoustics in Piping



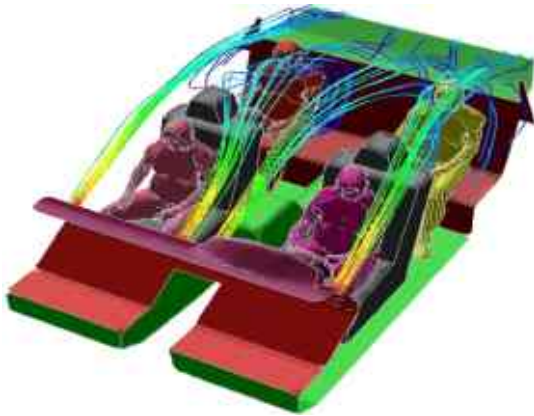
Wind Shield Deicing



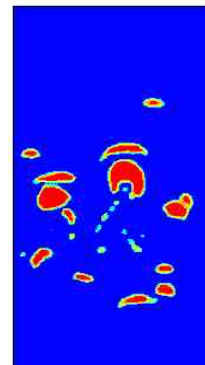
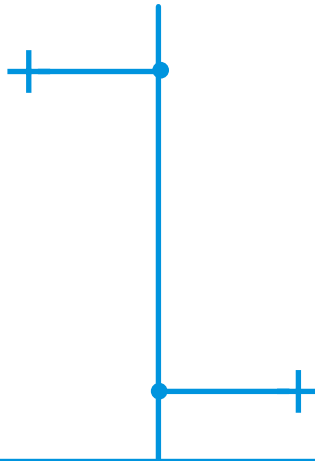
Centrifugal Compressor Performances



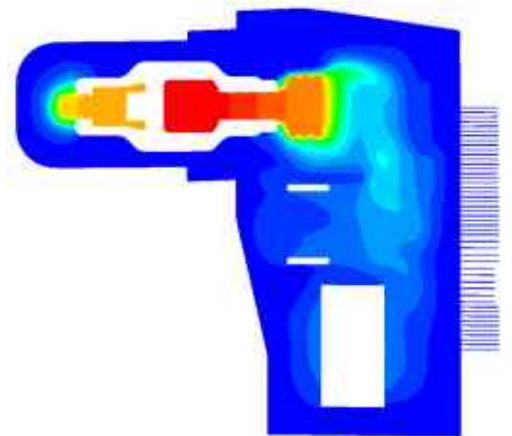
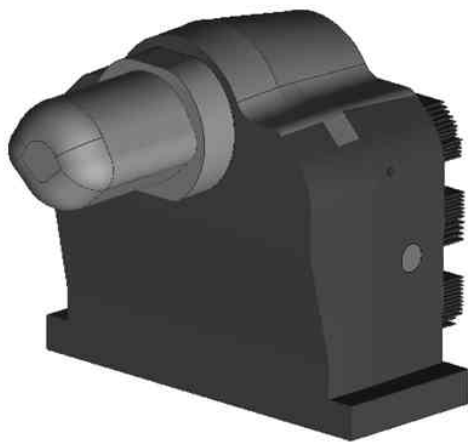
Butterfly Valve Sizing and Cv Calculations



Automobile HVAC



Air Bubble Motion in Cryolite



Design and Optimization of Thermal Cooling System for X-Ray Generator

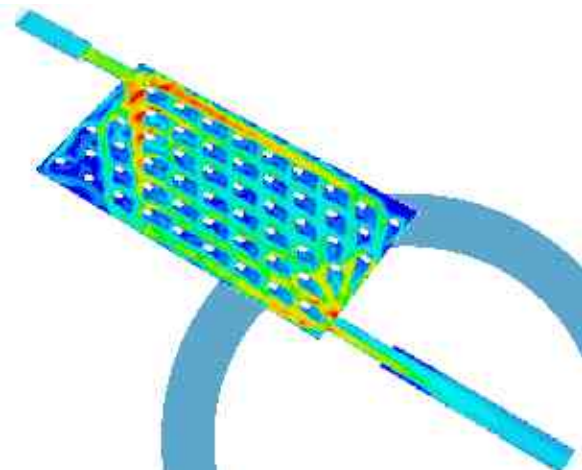
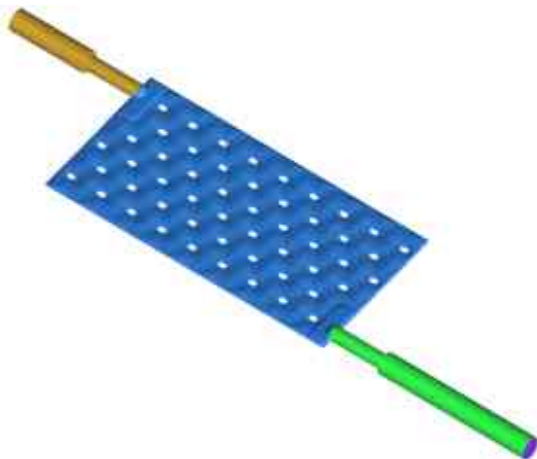


Plate Heat Exchanger Analysis



Core Team >

Vijay Mali

M.Tech. (Aerodynamics), IIT Bombay

Expertise : Project Management, Design Optimization, Flow Analysis

Sandip Jadhav

M.Tech. (Aerodynamics), IIT Bombay

Expertise : Computational Geometry, Grid Generation, Software Development

Santosh Bhoosthali

M.Tech.(Thermal Science), IIT Bombay

Expertise : Heat Transfer, Turbo Machinery and Heat Exchangers

Nem Kuamr

B.Tech.(Aeronautical Engineering), PEC

Expertise : Mathematical Modeling, Software Deployment and Integration

Dr. Ganesh Visavle

Ph.D.(Chemical Engineering), UDCT, Mumbai

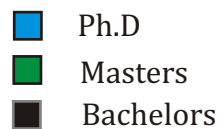
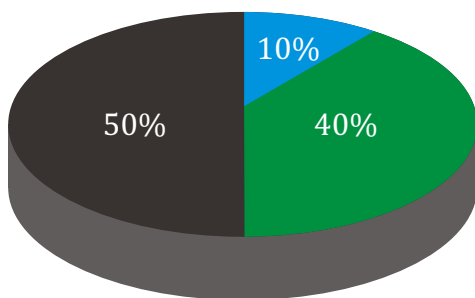
Expertise : Heat Transfer, Solar Heating Applications

Sam Mathew

B.Tech.(Chemical Engineering), IIT Bombay

Expertise : Chemical Reactions, Multiphase and Reacting Flows

Team Distribution





Advisory | Consultants | Technologist >

Advisory

Prof. K. Sudhakar

PhD, IIT Bombay

Professor, Department of Aerospace Engineering,
IIT Bombay

Mr. Rakesh Mehta

M.Tech., IIT Bombay

Director, Bit Mapper Integration Technologies (P) Ltd., Pune
Director, Mechatronics (P) Ltd. Pune

Consultants

Dr. M. S. Tandale

PhD, IIT Bombay

Professor and Head, Department of Mechanical
Engineering, BATU, Lonere

Mr. Amitay Issac

PhD, UNSW, ADFA

M.Tech., CSE - IIT Bombay

Dr. Ashish Orpe

PhD, IIT Bombay

Scientist - National Chemical Laboratory, Pune

Technologists

Mr. Vishwadeep Shrivastav

M.Tech. (Fluid and Thermal), IIT Bombay

Dr. Vilas Kalamkar

PhD (Turbomachinery), IIT Bombay

Dr. Suryakant Nagdeve

PhD (Hypersonic Flows), IIT Bombay

Mr. Rajesh Ghole

M.Tech. (Biomedical), IIT Bombay

Mr. Vishal Yadav

M.Tech. (Process Engineering), IIT Bombay

CONTACT US



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Visit www.cctech.co.in for more information