

Company Profile

Nima group is a dynamic engineering firm which provides innovative modeling and design for complex industrial and commercial projects. In detail, we provide complete engineering, modeling, design, estimation, detailing, construction coordination, supervision of building and non-building structures, mechanical piping, HVAC, and expertise in other disciplines as well. We efficiently manage turnkey projects and provide complete engineering through our strategic alliances and in-house resources. Our Finite Element Modeling (FEM), Thermal Analysis, Computational Fluid Dynamics (CFD) and advanced engineering verifications, provide cost-effective solutions for our customers through the best engineering resources, practices, and knowledge.

Company Mission

To provide our customers with innovative, optimized engineering solutions utilizing advanced technology, leading to experiences that meet or exceed customer expectations in terms of project scope, budget, schedule, and quality.

Complete Project Modeling & Design Examples *

The works were done as assignments on behalf of Eisenmann Corporation

1. Complex EMS and RB conveyors support structures in Body and Press shop in General Assembly
 - 1.1. **Projects: HMMA, Comau Pico USA, Brose, CAPTIN, and DCX , GM SLP (Mexico & Canada), AAP Ohio**
2. Complex EMS, RB, IPF Conveyor support structures (Skillet Platform, Brake, Clutch and Fuel-filling large platform, all supply lines, door, engine, tire, chassis EMS etc) in General Assembly
 - 2.1. **Projects: HMMA, NAFTA, GM SLP (Mexico), AAP Ohio**
3. Design of all new-generation process tanks (Phosphate, E-Coat, General finishing, spray tanks)
 - 3.1. **Projects: MBUSI (AL, USA); Plastic Omnium; DCX (Windsor); Ford (St. Thomas, ON); BMW in Rastatt; Regensburg; Wolfsburg, Germany; FIAT in Tychy, Poland; GM SLP**
4. All types of Booths and Plenum Modeling and Analysis

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- 4.1. **Projects: DCX** (Windsor, ON) & St. Louis, MO, **Toyota** (Cambridge, ON) , **FORD** (St. Thomas, ON & Chicago, IL), **Plastic Omnium, Mobis, MBUSI** (AI, USA), **GM SLP**
5. All types of booths with robots, ovens, and housing, supported on steel structures for base coat, primer and clear coats
 - 5.1. **Projects: Siegel Robert, Toyota, MBUSI, Ford** (St. Thomas, ON & Chicago, IL), **DCX** (Windsor, ON & St. Louis, MO), **Thomas Bus, Toyota Cambridge, Plastic Omnium, Mobis, HMMMA, and FIAT, GM SLP**
6. Powder booth and support structures
 - 6.1. **Projects: DCX** (Windsor, ON)
7. Inverted Power & Free conveyors
 - 7.1. **Projects: DCX, INMATE, MULTI MAT, CAPTIN, Ford** (St. Thomas, ON), **AAP Ohio**
8. Turnkey building using concrete and steel, for the automotive industry
 - 8.1. **Projects: GM** (Moraine, OH), **Ford** (St. Thomas), **DCX** (Windsor, ON), **DCX Shap**
9. All Storm/Surface drainage management
 - 9.1. **Projects: GM** (Moraine, OH), **Ford** (St. Thomas, ON), **DCX** (Windsor, ON)
10. All utilities/large HVAC, process ducts, stack design, vortex shedding, breeching
 - 10.1. **Projects: RTO Holnam, DCX, MBUSI, FORD** (St. Thomas, ON), **GM** (Moraine, OH)
11. All types of foundation engineering (building & non-building)
 - 11.1. **Projects: GM** (Moraine, OH), **SLP Mexico, Ford** (St. Thomas, ON), **DCX, RTO HOLNAM** (MI, USA)
12. All types of Hydraulic Engineering of mechanical piping, compressed air & gas, waste water pipes, pumps, water hammer analysis and design
 - 12.1. **Projects: Ford** (St. Thomas, ON), **DCX, and GM** (Moraine, OH)
13. All types of Environmental airflow modeling
 - 13.1. **Projects: GM** (Oklahoma City, OK), **GM SLP, MBUSI, DCX**
14. All types of overhead Hoist structures, Econo hoist

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- 14.1. ***Projects: Tower Corydon, Granite, FreightLiner, Flex-N-Gate, Angus Palm, Volvo, Belle view***
- 15. ASRS structural analysis and design for automotive and ceramic applications
 - 15.1. ***Projects: DCX (Windsor, ON), HMMA Body shop, Corning (NY, USA)***
- 16. Estimation and Costing of complete Turnkey projects including building design
 - 16.1. ***Projects: GM Moraine, GM Mexico Ford (St. Thomas, ON), DCX, FORD (St. Louis, MO)***
- 17. Economical design and modeling of all types of non-building complex structures with tanks (Vario shuttle and housing)
 - 17.1. ***Projects: MBUSI (AL, USA & Rashtatt; Regensburg in Germany)***
- 18. FEA modeling for Skids and Lifter Booms
 - 18.1. ***Projects: DCX (Windsor, ON)***
- 19. FEA modeling for Lifts and its dynamic analysis
 - 19.1. ***Projects: FORD (St. Thomas, ON), Comau Pico, DCX***
- 20. Modeling of Vario Shuttle Rails
 - 20.1. ***Projects: MBUSI, DC Rashtatt, BMW (Regensburg & Wolfsburg)***
- 21. Vario Shuttle Transfer Stations by *specially designed cantilever beams*
 - 21.1. ***Projects: MBUSI (AL, USA)***
- 22. Stress, Strain, and Fatigue analysis by simulation and experimentation on various model structures
 - 22.1. ***Projects: MBUSI, HMMA, MOBIS, Freight Liner, Tower, DCX, Comau Pico***
- 23. QFD (Quality Function Deployment) analysis
 - 23.1. ***Projects: HMMA, Comau Pico***
- 24. *LCA (Life Cycle Analysis) of Products*
 - 24.1. ***Projects: RTO Holnam (Cement Factory in MI)***
- 25. Statistical analysis of quality of welding using regression modeling
 - 25.1. ***Projects: Comau Pico, MBUSI***

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26. Thermal Analysis of car body in different ovens using Harvard-Analysis TAS software
 - 26.1. ***Projects: DCX***
27. RTO Stacks, Fan Foundation, dynamic analysis for seismic regions, vibration analysis
 - 27.1. ***Projects: IBM, Corning (NY, USA), DCX (Windsor, ON), Cascade Grain (OR, USA)***
28. Economical design of RTO foundation resting on poor soils using piles
 - 28.1. ***Projects: RTO Holnam (MI, USA)***
29. Modeling Skid-mounted RTO
 - 29.1. ***Projects: DCX, NY-Biofuels***
30. Analysis, design, and reinforcing of existing building trusses, foundation
 - 30.1. ***Projects: DCX, HMMA, MBUSI, Ford (St. Thomas, ON)***
31. Integration of MBS (Model Based Simulation), QFD (Quality Function Deployment), and ECD (Environmental Conscious Design)
 - 31.1. ***Projects: MBUSI***
32. Hydraulics, structural analysis, and design of water & waste water treatment plants, pump stations, intakes, etc...
33. Computational Fluid Dynamics (CFD) modeling to investigate flow in ducts, booths, tanks for fully developed laminar or turbulent flows, etc...
 - 33.1. ***Projects: GM SLP (Mexico)***
34. Pressure vessel and vacuum furnace per ASME code
 - 34.1. ***IPSEN Inc.***

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References

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3. Giffin International

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4. IPSEN Inc.

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**Abbreviations:*

DCX- Daimler Chrysler- Windsor

GM- General Motors

HMMA- Hyundai Motor Manufacturing- Alabama

MBUSI- Mercedes Benz USA- Alabama

RTO- Regenerative Thermal Oxidizer