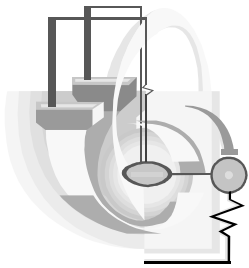


## Emerging Technologies – Can we make a Leap?

*A*s you are walking through the plant you ask yourself, “Can it work better?”



Can there be another pump, valve, compressor, or pipe clamp? You wonder, “so many of these items exist” and there is a question as to whether to even look at any new products in these traditional fields. After all, your valve or pump may have been working satisfactory for years, so why is there a need for change? Your purchasing department has negotiated deals and you are satisfied with the price/performance ratio when compared to other existing technology out on the market. But then again, your product is not quite where you want it. What you need is a technology leap to get you where you want to be. You have talked to the vendors but they are happy with the status quo and their management is not interested in making the investment or taking the risk.

To make a leap in technology the following is needed.

1. A major industry problem that needs a solution. For existing markets, the OEM and Operator must be partners.

2. An Operator and OEM willing to take some commercial risk. Both the management of the OEM and Operator must support the effort and not be “fair weather” players.
3. A project should be formed with clear goals and objectives. A vision of the solution to the problem needs to be established.
4. A technology team must be assembled from the Operator and the OEM. Team members must be “out of the box” thinkers. Team players are a must and the prima donnas must be “axed” off the list. All team members must understand the goals and objectives and see the vision of the project. The team’s members must be skilled and equipped with the latest engineering tools available. The OEM must also have a track record of success.
5. The OEM must be willing to supply a prototype to meet goals and objectives and the operator must be willing to test the prototype and provide feedback data. The OEM must offer the product and a price that the Operator can afford and the Operator must be willing to pay for the technology leap so the OEM can make a profit. If these conditions cannot be satisfied; then forget it and go do something else.
6. A solution methodology must be developed to address the problem. In a process system, this would be a process, metallurgical/materials, and mechanical solution to the problem. Included would also be a testing program.

7. The OEM and Operator must be in position to freely exchange information to ensure success and manage risk. This can be accomplished through secrecy agreements.

There are many opportunities in the plant for technology upgrades. Operators can identify major industrial challenges at professional society meetings or conferences. The first step by an Operator is to not accept the status quo and believe that there is a solution out there and a group to solve the problem. Identify the need, then get the right team and make a successful leap.



### *KnightHawk Project Update*

- Piping Acoustical Vibration – Petrochemical
- TLE Coking Analysis – Petrochemical
- TLE Failure Analysis – Petrochemical
- Piping Failure – Refinery
- Pipe Stress – Refinery
- Furnace Design CFD – Petrochemical
- CFD on GAS Turbine Inlet - OEM
- Centrifugal Compressor Analysis – FEA, Rotordynamics - Petrochemical
- Secondary TLE analysis – CFD, FEA, Custom Software Petrochemical
- Refractory line redesign – high temperature – FEA –Petrochemical
- Structural Dynamics - Petrochemical
- Exchanger Failure – Petrochemical
- Piping Analysis at Nuclear Power Plant – FEA, Structural Dynamics
- Centrifugal Compressor Failure Analysis at Refinery
- Pellet Quality Problem – Polymers Plant
- Structural Dynamics – Petrochemical
- Structural Dynamics – Nuclear
- Pelletizing Die Assessment – Petrochemical

### *Cliff's Notes:*

BORSIG has successfully developed a new product called a pelletizing die through the methodology described above. The BORSIG Pelletizing Die technology will revolutionize the thinking in the pelletizing die business. The prototype has been installed and all goals and objectives of the project were successfully achieved. The success was due to the teamwork between the Operator and BORSIG. In addition BORSIG is introducing service and sales on this product in a revolutionary way that has never been done in this business segment of the polymers industry. Visit our web site at [www.borsigtech.com](http://www.borsigtech.com), it contains performance updates of the prototype and complete details of the BORSIG Pelletizing Die Technology.

BORSIG Technologies, Inc., KnightHawk Engineering Division is also pleased to announce the addition of Dr. Hoting, Dr Blum, Mr. Schreck, and Mr. Heinze from our Berlin Office to our technology team; in design, failure analysis and troubleshooting. Visit our website for more information.

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