

“PDMT Panel Discussion”

“Productivity in Top Tier US Shipyards”

Moderated by
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Why is Don Walter the Moderator?

- He believes there is a serious productivity problem that is solvable.
- He has been agitating for several years about the problem with no success
- He believes that there is an obvious reason for the problem
- He believes there is an obvious solution to the problem
- After recent dialog with panel chair Dave Wood, Dave kindly invited him to “put his money where his mouth is”

The Topic

- This discussion addresses the importance of the role that shipyard productivity (as measured in terms of man-hours per ton) plays in the overall cost and schedule picture of a typical shipyard and asks the question:

“Given the extensive and intricate array of components that drive cost and schedule just how significant is shipyard productivity in terms of its contribution to improving cost and schedule performance?”

“The Current Situation”

- Top Tier US Shipbuilders continue:
 - A. To have problems meeting Cost and Schedule Targets.
 - B. To be the focus of much criticism from a variety of sources
 - C. To produce warships that are too expensive and take too long to design and build and
 - D. To be uncompetitive in the international commercial market

“It’s Not All the Fault of the Shipyards”

- According to the team that led the “Affordable Shipbuilding” forum at the 07 SNAME national meeting these are some of the major cost contributors:
 - Cost of Material and Equipment
 - Certainly
 - Regulatory Environment
 - Fact of life for shipbuilders
 - Lack of Industry Standardization
 - To some extent
 - Classification Inconsistencies
 - To some extent
 - Foreign Subsidies
 - No impact
 - Labor Costs
 - Certainly and rightfully so
 - and guess what

***** PRODUCTIVITY *****

*** The Truth about Productivity ***

- Productivity is the only cost contributor that is unique to and exclusively under the control of the individual shipyard
- Other cost contributors are inherent to the business environment that each shipyard has to deal with

Another Truth about Productivity:-

“It can be a significant cost and schedule saver”

- Take a hypothetical shipyard of 10000 total payroll
- Assume 60% or 6000 are hourly workers who actually build the ship
- Assume a 2000 hour work year for a total of 12,000,000 production mh/yr
- Assume an average burdened labor rate for hourly workers of \$60/hr
- Labor costs for the year come to \$720,000,000.
- Assume this labor force produces 15,000 compensated gross tons of ship then mh/cgt = 800
- A 1% improvement in productivity would reduce annual labor cost in this hypothetical 10000 person shipyard by \$7.2M
- A 1% improvement in productivity for this hypothetical 10000 person shipyard requires that production workers produce in 792 mh what they currently produce in 800 mh
- Leading Japanese shipyards reportedly strive for and routinely achieve a 2 to 3 % annual productivity improvement rate using the philosophy of “continuous improvement” in order to maintain their international position
- It is reported that Korean shipyards in order to get to where they are today achieved annual productivity improvements in the 10% range.

An Obvious Question for Discussion

“Given the huge ship design and construction resource available in the US (a resource that routinely produces World class products) why can’t our shipyards emulate their foreign counterparts in the area of productivity?”

“A Simple Hypothesis to Consider”

- Could it be that Top Tier Yards Missed the Boat on :
 - A. The Effective Implementation of “Modern Shipbuilding Methods”
 - As defined in the Chirillo report to congress in 1985
 - B. The Many Technology Transfer Opportunities
 - That were all the rage in the late seventies early eighties
 - C. The Practice of Continuous Improvement
 - A philosophy that still drives the World Class yards but apparently has no place in US yards

Two More Questions

Since US Shipbuilding is not simply another free market enterprise but is in fact a strategically essential national resource (that for the most part is funded by the US taxpayer) should the government:

1. Exercise stronger regulatory oversight over the industry's performance?"
2. Revitalize and actually follow through with "Acquisition Reform".

And One Last Question

“Is the NSRP providing the kind of leadership that will achieve the objectives assigned to it when the ASE was introduced in the late nineties?”

A reminder of the two primary objectives that so far have not been achieved:-

- 1 Help the industry produce affordable warships
- 2 Help the industry become internationally competitive in commercial shipbuilding

*** OK LET THE DISCUSSION BEGIN ***