



# DDG 1000 Class Destroyer



DDG 1000 February 2017



DDG 1001 February 2018



DDG 1002 December 2017

## DDG 1000 Overview

*10 April 2018*

*Sea Air Space (SAS)*



*DDG 1000 Program Manager, PMS 500*

*CAPT Kevin Smith*



# DDG 1000 CLASS



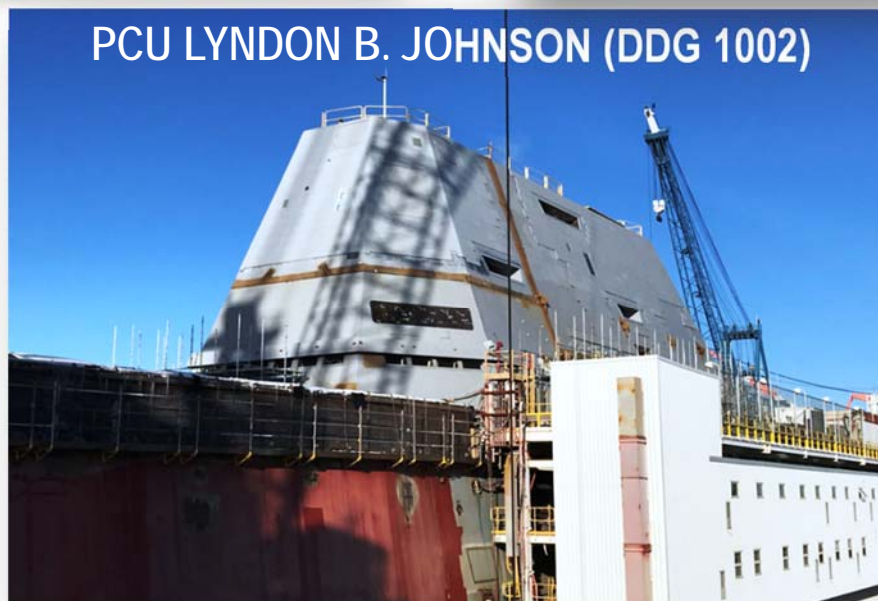
USS ZUMWALT (DDG 1000)



PCU MICHAEL MONSOOR (DDG 1001)



PCU LYNDON B. JOHNSON (DDG 1002)





# USS ZUMWALT (DDG 1000)

## San Diego Homeport



- **Nearing completion of industrial work in preparation to activate combat systems (weapons, sensors and communications)**
- **Combat System Test and Activation will continue through 2018**
- **Operational Test & Evaluation to commence in FY18 prior to Initial Operational Capability (IOC) in FY20**





# PCU MICHAEL MONSOOR (DDG 1001)

## Bath, ME Building Yard



- **Started DDG 1001 fabrication March 2010 – 99% complete (as of Mar 2018)**
  - Christening completed 18 June 2016, Float Off completed 20 June 2016
  - Completed Builder's Trials 04 December 2017 with a follow-up BT 14-17 January 2018
  - Acceptance Trials completed 29 January – 01 February 2018
  - HM&E delivery planned for April 2018





# PCU LYNDON B. JOHNSON (DDG 1002) Bath, ME Building Yard



- **Started DDG 1002 fabrication April 2012 – 73% complete (as of Mar 2018)**
  - Lay Keel milestone achieved on 30 January 2017
  - DDG 1002 Hull Integration planned in March 2018
  - Christening/Float-off planned for November 2018
  - HM&E Delivery scheduled for March 2020





# Air Warfare Detect–Track– Engage Testing Self Defense Test Ship (SDTS)



- **Wallops Island / Self Defense Test Ship (SDTS)**
  - Successfully completed sixth TRACKEX June 2017
  - Completed Integration and Test August 2017
  - Preparing for SDTS Firings 2018





# DDG 1000 Zumwalt Class Destroyer System Description



## Hull

Wave-Piercing Tumblehome

## Sensors

- SPY-3 X-Band Multi-Function Radar (MFR)
- Volume Search Radar (VSR) (Space & Weight Reservation)
- HF & MF Bow Sonar Arrays
- Multi-Function Towed Array
- EO/IR System
- ES System
- EXCOMMS – Alternative Navy C4I POR

## Weapons

- (80) Advanced Vertical Launch (AVLS) cells for Tomahawk, ESSM, Standard Missile
- (2) Advanced Gun System (AGS) 155 mm guns
- (600) 155 mm rounds
- (2) MK 46 Close In Guns Systems (CIGS)
- Torpedo Defense (Space Reservation)
- Anti-Terrorism

## Characteristics

Overall Length	610 ft	Displacement Full Load	15,612 LT
Maximum Beam	80.7 ft	Installed Power	78 MW
Navigational Draft	27.6 ft	Crew Size	147
Speed	30 kts	(plus 28 person aviation detachment)	

## Integrated Power System (IPS)

- (2) Main Turbine Generators (MTG)
- (2) Auxiliary Turbine Generators (ATG)
- (2) 34.6 MW Advanced Induction Motors

## Superstructure

- Composite Structure
  - DDG 1000 / 1001
- Steel
  - DDG 1002

## Aviation

- (1) MH60R and (3) VTUAVs /
- (2) MH 60Rs

## Boats

- (2) RHIBs
- (sized for (2) 7m or (2) 11m RHIBs)



# DDG 1000 Zumwalt Class Destroyer Requirements



- Carry the fight to the enemy through offensive operations and destroy enemy targets ashore with precision strike
- Contribute to littoral dominance: surface, air, sub-surface
- Employ an open architecture total ship computing approach
- Be highly survivable
- Reduce crew size

## Requirements Document

- DD(X) Operational Requirements Document, Change 1 approved, dated Jan 2006
- DD(X) will transition from a single step to full capability approach to a spiral acquisition
  - Spiral acquisition fields operationally and supportable capability in as short a time as possible, with the explicit intent of delivering improved or updated capability in the future
- Acquisition Risk Mitigated through spiral development, modeling & simulation, and a combination of land-based / at-sea testing
- Navy in process of updating required documents to support new surface strike requirements

<u>Key Performance Parameters</u>	<u>Threshold</u>	<u>Objective</u>
Interoperability Top Level IERs	2	All IERs
Number of Guns	600	1200
Gun Magazine Capacity	80	128
Vertical Launch Cells	175	125
Radar Cross Section		
Manning		
Survivability (5)		
Force Protection (2)		





# Summary



- **DDG 1000 is a multi-mission surface combatant**
  - Signature reduction, active and passive self-defense systems, and enhanced survivability features
  - Provides credible forward naval presence while operating independently or as an integral part of Naval, Joint, or Combined Expeditionary Strike Forces
  - Navy in process of updating required documents to support new surface strike requirements
- **DDG 1000 in Homeport San Diego, CA**
  - Arrived San Diego, CA 8 Dec 2016
  - Nearing completion of industrial work in preparation to activate combat systems (weapons, sensors and communications)
  - Combat System Test and Activation will continue through 2018
  - Planning to commence Operational Evaluation and Combat System Qualification Testing in 2018, culminating in Initial Operation Capability in 2020
  - Shift to Naval Station San Diego conducted 02 March 2018
- **DDG 1001,1002 under contract and significant production underway**
  - DDG 1001/1002 completion 99% / 74%
  - Builder's Trials 04-07 December 2017 and 14-17 January 2018
  - Successful Acceptance Trials 29 Jan – 01 Feb 2018; HM&E delivery planned for 24 April 2018
  - DDG 1002 Full Hull Integration scheduled for April 2018