

APPLICATION - THIS STANDARD IS APPLICABLE TO NAVY AND MARINE CORPS REBUILT AIRCRAFT TIRE PRODUCTION CONTRACTS THAT SPECIFY NONDESTRUCTIVE INSPECTION (NDI) REQUIREMENTS.

PURPOSE - THIS STANDARD ESTABLISHES PROCEDURAL REQUIREMENTS TO APPROVE NDI EQUIPMENT AND INSPECTION ACCEPTANCE CRITERIA FOR NONDESTRUCTIVE INSPECTION OF PRODUCTION REBUILT TIRES PRIOR TO DELIVERY TO THE GOVERNMENT.

PROCEDURAL REQUIREMENTS -

A. METHODS OF INSPECTION - ACCEPTABLE NDI METHODS (THOSE CAPABLE OF DISCERNING 0.5 INCH DIAMETER OR SMALLER DEFECTS) ARE LISTED BELOW. OTHER METHODS THAT PROVIDE EQUAL OR BETTER DEFECT DETECTION CAPABILITY MAY BE USED WHEN APPROVED BY THE COGNIZANT ACTIVITY. EACH METHOD SHALL BE CAPABLE OF PRODUCING A PERMANENT RECORD OF THE INSPECTION.

1. RADIOGRAPHIC
2. ULTRASONIC
3. SONIC
4. HOLOGRAPHIC
5. MICROWAVE
6. INFRARED
7. COMBINATIONS OF ABOVE METHODS

B. APPROVAL OF INSPECTION PROCEDURES - AT LEAST SIXTY (60) DAYS PRIOR TO BID OPENING, THE CONTRACTOR SHALL SUBMIT A WRITTEN DETAILED NONDESTRUCTIVE INSPECTION PROCEDURE TO THE COMMANDING OFFICER, NAVAIR ENGINEERING SUPPORT OFFICE, NORTH ISLAND, SAN DIEGO, CA 92135, ATTENTION: CODE 34420. THE PROCEDURE SHALL DESCRIBE THE NDI EQUIPMENT, INSPECTION PROCEDURES, ACCEPTANCE STANDARDS AND QUALIFICATION OF EQUIPMENT OPERATORS. IN ADDITION, THE FOLLOWING SHALL ALSO BE INCLUDED:

1. THE NAME OF EQUIPMENT MANUFACTURER.
2. THE MODEL AND SERIAL NUMBERS OF THE EQUIPMENT, RECORDERS, OR OTHER COMPONENTS OF THE INSPECTION SYSTEM.
3. A COPY OF EACH TYPE OF DEFECT RECORDED BY THE SYSTEM DEMONSTRATING ITS ABILITY TO LOCATE AND DEFINE THE DEFECTS LISTED BELOW.

IN THE EVENT THE SUBMITTED PROCEDURES ARE NOT ADEQUATE, THE COGNIZANT ACTIVITY SHALL INFORM THE CONTRACTOR AND RECOMMEND CORRECTIVE ACTIONS. THE INSPECTION PROCEDURES SHALL BE APPROVED PRIOR TO THE AWARD OF CONTRACT.

ACCEPTANCE CRITERIA -

A. SAMPLING - EVERY TIRE PRODUCED DURING THE CONTRACT OR ORDER SHALL BE ONE-HUNDRED PERCENT (100%) NDI INSPECTED BY THE CONTRACTOR AFTER COMPLETION OF THE REBUILDING PROCESS AND PRIOR TO DELIVERY TO THE GOVERNMENT.

B. TIRE INSPECTION - THE AREA OF THE TIRE SUBJECTED TO INSPECTION SHALL BE FROM SHOULDER TO SHOULDER (SHOULDER AREA AS DEFINED IN MIL-T-5041), 360° AROUND THE TIRE. THE TOTAL THICKNESS OF THE REBUILT TIRE MUST BE NONDESTRUCTIVELY INSPECTED THROUGHOUT THE DESCRIBED AREA.

C. DEFECTS -

1. DEFECTS SHALL BE DEFINED AS:
 - a. SEPARATIONS/UNBONDS
 - b. VOIDS/POROSITY
 - c. MULTIPLE CORD FRACTURES/IMPACT BRUISES
2. THE TOTAL AREA OF ALL DEFECTS IN EACH TIRE SHALL NOT EXCEED THE FOLLOWING:

TIRE SIZE	DEFECT AREA SQ. IN. (MAX)*
40X14 (26 AND 28 PR)	1.0
44X13 (26 PR)	1.0
ALL OTHER SIZES	0.5

* CARCASS SPLICE DEFECTS SHALL NOT BE CAUSE FOR REJECTION

3. THE TOTAL AREA OF DEFECTS EQUAL TO, OR EXCEEDING THE SIZE SPECIFIED ABOVE SHALL REJECT THE TIRE BEING INSPECTED. REJECTION OF THREE (3) TIRES IN A 100 TIRE LOT SHALL BE CAUSE TO NOTIFY THE CONTRACTING OFFICER. TIRES THAT ARE REJECTED SHALL BE RETAINED, ALONG WITH THE INSPECTION RECORDING, PENDING DISPOSITION INSTRUCTIONS FROM THE CONTRACTING OFFICER.

D. MAINTENANCE OF INSPECTION RECORDS - THE RECORDING FOR EACH TIRE SHALL CLEARLY DEPICT THESE DEFECTS AND SHALL INCLUDE TIRE IDENTIFICATION DATA AS FOLLOWS: SIZE, SERIAL NUMBER, REBUILD LEVEL, COMPANY, PLANT LOCATION, AND JULIAN DATE OF REBUILD. A PERMANENT RECORD SHALL BE REQUIRED FOR EACH TIRE INSPECTED. ALL NONDESTRUCTIVE INSPECTION RECORDS SHALL BE RETAINED BY THE CONTRACTOR FOR A PERIOD OF SIX MONTHS AFTER WHICH TIME THEY SHALL BE FORWARDED TO THE COMMANDING OFFICER, NAVAIR ENGINEERING SUPPORT OFFICE, NORTH ISLAND, SAN DIEGO, CA 92135. ATTENTION: CODE 34420

This military standard is approved by NAVAL AIR SYSTEMS COMMAND, Department of the Navy and shall be used by that activity. All other military activities are required to employ this standard where suitable.

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APPROVED

P.A. NAVY - AS Other Cust	TITLE NONDESTRUCTIVE INSPECTION OF REBUILT AIRCRAFT TIRES, REQUIREMENT FOR	MILITARY STANDARD	
		MS14189(AS)	
PROCUREMENT SPECIFICATION	SUPERSEDES	SHEET	1 OF 1