
 <small>TIMBER INDUSTRY DEVELOPMENT DIVISION</small>	<b>DOCUMENT TITLE</b>  Work Instructions for Inspection and Grading of Logs – Checkpoint	
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#### CIRCULATION

This work instruction is issued on controlled basis to:

<b>S/NO.</b>	<b>DESIGNATION</b>	<b>COPY NUMBER</b>
1	Executive Director	02
2	Director, Operations	03
3	Manager, Grading and Inspection	04
4	Management Representative (MR)	09
5	Area Manager, Sunyani	10
6	Area Manager, Kumasi	11
7	Area Manager, Takoradi	12
8	Area Manager, Tema	13
9	Area Manager, Final Inspection, Takoradi	14
10	Area Manager, Jasikan	15
11	Area Manager, Akim Oda	16
12	Area Manager, Techiman	17
13	Area Manager, Sefwi Awaso	18
14	Area Manager, Samreboi	19
15	Area Manager, Bolgatanga	20
16	Area Manager, Assin Fosu	21
17	Area Manager, Accra	22
18	Deputy Management Representative	23

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## **1 PURPOSE**

The purpose of this Work Instruction is to provide guidelines for inspection and grading of round log at Checkpoint and Log Yards.

## **2. SCOPE**

The Scope of application of this document is GI work instruction for round log inspection, measurement, volume calculation and grading.


## **3 RESPONSIBILITY**

Director of Operations (DO) is responsible for setting out criteria for round logs inspection and grading.

Manager, Grading and Inspection (MGI) is responsible for development of work instructions and supervising its implementation


Area Manager (AM) is responsible for supervising field application of this Work Instruction

Inspector of Timber (IT) is responsible for carrying out inspection and grading of logs.


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#### 4. INSTRUCTION


CI/ No	Task	Responsibility	Related Documents
4.0	<p><b>TOOLS REQUIRED</b></p> <ul style="list-style-type: none"> <li>Steel tape</li> <li>Utility Knife</li> <li>Timber crayon</li> <li>Calculator</li> </ul> <p><b>DOCUMENTS REQUIRED</b></p> <ul style="list-style-type: none"> <li>Timber Reckoner</li> <li>Log Register</li> <li>Log Re-measurement and Conveyance Certificate</li> <li>Clip Board</li> </ul>		
4.1	<p><b>Step No. 1</b> Collect and inspect the following documents from the driver of the vehicle conveying the logs.</p> <ol style="list-style-type: none"> <li>Property Mark Holder's Waybill;</li> <li>Four (4) copies (<b>not photocopies</b>) of Forestry Commission Log Measurement and Conveyance Certificate; LMCC/PLMCC</li> <li>(<b>Two copies in the case of Log Transfer Certificate</b>)</li> </ol>	IT	
4.2	<p><b>Step No.2</b> Check the above mentioned documents to verify the following:</p> <ol style="list-style-type: none"> <li>Check to ensure the waybill is dated and signed by the mark holder's authorized representative and is <b>not altered</b>.</li> <li>Check to ensure the LMCC/LTC/PLMCC is not altered but has been duly filled, signed and stamped by the authorized official of the Forest District/TIDD Area of issue and has not expired.</li> <li>Check to ensure that vehicle number at the front and driver's name as given tally with information provided in Way bill and LMCC/LTC/PLMCC</li> <li>Information on waybill and LMCC/LTC/PLMCC tallies with waybill.</li> </ol> <p><b>NB. Issue an embargo form under the following condition:</b> <i>Falsification, alterations or expiration of waybill and or LMCC/LTC/PLMCC;</i></p>	IT	LMCC/LTC/ PLMCC

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4.3	<p>Step No.3</p> <p>a. Check to ensure that both ends of each log are properly marked with white waterproof paint (<b>not chalk/crayon</b>)</p> <p>b. Check to ensure log markings at both ends tally with the information on the LMCC/LTC and Waybill:</p> <table><thead><tr><th>ON-RESERVE</th><th>OFF-RESERVE</th></tr></thead><tbody><tr><td>i. Property Mark</td><td>Property Mark</td></tr><tr><td>ii. Locality Mark</td><td>Locality Mark</td></tr><tr><td>iii. Reserve Code</td><td>Stock Number</td></tr><tr><td>iv. Stock Number</td><td>Species Code</td></tr><tr><td>v. Compartment Number</td><td>Tree Number</td></tr><tr><td>vi. Species Code</td><td>Log Number</td></tr><tr><td>vii. Tree Number and</td><td></td></tr><tr><td>viii. Log Number</td><td></td></tr></tbody></table> <p>(Plantation Logs do not have the above markings)</p> <p><b>NB. Issue an embargo form under the following conditions:</b></p> <p>a. <i>Improperly marked log(s);</i></p> <p>b. <i>Log(s) markings or measurement not tallying with information on waybill and or LMCC/LTC.</i></p>	ON-RESERVE	OFF-RESERVE	i. Property Mark	Property Mark	ii. Locality Mark	Locality Mark	iii. Reserve Code	Stock Number	iv. Stock Number	Species Code	v. Compartment Number	Tree Number	vi. Species Code	Log Number	vii. Tree Number and		viii. Log Number		IT	
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4.4	<p>i. <b>Step No.4</b></p> <p><b>Identify/Verify timber species</b></p> <p>Identify timber species and ensure it tally with information on waybill and LMCC/ LTC/PLMCC</p> <p><b>NB. Issue an embargo form under the following conditions:</b></p> <p>a. <i>Misnaming of timber species;</i></p>		Species Identification Manual																		
4.5	<p><b>Step No. 5</b></p> <p><b>Measure butt and tapering ends <i>diameters and length of log</i></b></p> <p>i. At the butt end of log, locate imaginary centre</p> <p>ii. Mark and measure the shortest diameter (cm) through the imaginary centre using steel tape and indicate as Db1.</p> <p>iii. Divide Db1 by 2 and mark this point as the true <i>centre.</i>, e.g. 66.90cm/2 = 33.45cm</p> <p>iv. Record Db1 to the last whole centimetre; e.g. 66.90cm is recorded as 66cm</p> <p>v. Mark and measure a perpendicular passing through the <i>true centre</i> determined, and record as Db2 to the last whole centimetre. E.g. 85.70cm is recorded as 85cm.</p> <p>vi. Determine the average of Db1 and Db2 ie (Db1+Db2)/2 as Db and record to the last whole centimetre ie (66cm+85)/2=75.5=75cm</p> <p>vii. Repeat i)- v) at the tapering end of log as Dt1 and Dt2</p> <p>viii. Determine the average of Dt1 and Dt2 ie (Dt1+Dt2)/2 as Dt</p>																				

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	<p>and record to the last whole centimetre.</p> <p>viii. Using linen tape, measure length (L) of log in meters between two ends and at two opposite sides and record the shorter distance to the last whole 10cm E.g. 9.99 M is recorded as 9.90 M;</p> <p>ix. Write length of log at one of the two ends and draw circle around it.</p> <p>x. Check whether diameters and lengths measurements tally with waybill and LMCC/LTC.</p> <p><b>NB.</b></p> <ol style="list-style-type: none"> <li><b>Issue Re-Measurement Log Measurement and Conveyance Certificate (RLMCC) Under The Following Conditions:</b> <ol style="list-style-type: none"> <li>Measured length varies from LMCC/LTC length by <math>\pm 20</math>cm. Or</li> <li>Measured average diameter of Db or Dt exceeds LMCC/LTC average by <math>\pm 3-4</math> cm.</li> </ol> </li> <li><b>Issue An Embargo Form Under The Following Conditions:</b> <ol style="list-style-type: none"> <li>Measured <i>length measurement</i> varies by <math>\pm 30</math>cm</li> <li>Measured <i>average diameter(s) of Dt or Db</i> varies by <math>\pm 5</math> cm of LMCC/LTC diameter</li> </ol> </li> </ol>		
	<p><b>Step No. 6 - Calculate Volume</b></p> <ol style="list-style-type: none"> <li>Using log volume table (Ready Reckoner), find Db and Dt on the vertical and horizontal axis respectively.</li> <li>Find the value in the intersection of Db and Dt.</li> <li>Calculate volume by multiplying value in (ii) by the length (L).</li> <li>Check whether calculated volumes tally with waybill and LMCC/LTC</li> </ol> <p><b>NB. Issue an embargo form under the following condition:</b>  <b>Volume obtained exceeds volume in LMCC/LTC</b></p>		Ready Reckoner
	<p><b>Step 7</b>  <b>How to issue Embargo Form or RLMCC</b></p> <ol style="list-style-type: none"> <li>Collect original LMCC/LTC/PLMCC</li> <li>Fill Embargo form or RLMMC</li> <li>Hand over Original and Triplicate copies to client and retain quadruplicate as book copy</li> <li>Immediately submit duplicate and LMCC/LTC/PLMCC/RLMCC to AM for onward submission to GIM.</li> </ol>		

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	<p><b>Step 8</b></p> <p><b>i.</b> Identify defects and grade all logs on the truck using the Ghana Standards for logs,</p> <p><b>ii.</b> Record defects and grade on the four (4) copies of the LMCC/PLMCC (For LTC compare determined defects and grade with same in the GWTS)</p>		<p><i>GS 1190:2018</i></p>
	<p><b>Step 9</b> <b>Validate LMCC/LTC/PLMCC as follows:</b></p> <p>i. Validate the logs in transport model of the GWTS</p> <p>ii. Stamp Way-bill as” INSPECTED” where verifications are confirmed</p> <p>iii. Complete TIDD section of the 4 copies of the LMCC/PLMCC and stamp “PASSED FOR MILLING <b>((Two copies in the case of Log Transfer Certificate))</b></p> <p>iv. Detach and return duplicate and triplicate copies; to Area Manager (AM) and hand over original and quadruplicate to the bearer.</p> <p>v. Return duplicate to AM for onward submission to MGI and duplicate to FSD (In the case of LTC, give the original copy to the bearer and submit duplicate to AM)</p>		
	<p><b>Step 10</b> Record details of inspection into log register.</p>		

## 5. REFERENCE

Ghana Standard for Grading Round Logs

Timbers Species Identification Manual of Ghana

TIDD-GI-P6.2-01 Procedure for rules of access and access to facilities and equipment

TIDD-GI-P7.4-01 Procedure for preparation and submission of inspection report/certification.

Tropical Round Logs: Standard Specifications and Grading Rules.(GS 1190:2018)

