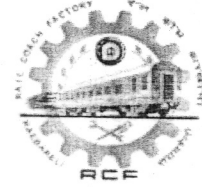




# रेल डिब्बा कारखाना, रायबरेली RAIL COACH FACTORY, RAEBARELI



FORM NO: RCF/RBL/QMF 8001  
VERSION: 2012-01-01

## ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: RCF/RBL/QC/RSC

Date: 07/06/2014

SHELL	L	W	A	C	C	N	3	0	5	0	/	2	0	1	3	DATE OF DISPATCH	0	4	0	3	2	0	1	4
RLY	S	R	Type	L	W	A	C	C	N	Coach No.	1	3	1	4	9	/	C							

1. Railway Board's Order No : 2013/M(C)/142/3 dated 27.12.2013
2. Tare Weight of Coach : 45.6 Tonnes
3. Carrying Capacity : (a) Seating : 72 (b) Sleeping : 72 (c) Luggage : NIL

### 4. SHELL LEADING DIMENSIONS:

S NO	DESCRIPTION	DIMENSION (MM)
1.	Maximum length over body	23700
2.	Maximum width over body	3240
3.	Maximum height from Rail Level	4250
4.	CBC height/Buffer height from Rail level 1105 +0/-15	1) 1102 (NPPE) 2) 1103 (PPE)

### 5. TRACEABILITY OF SHELL ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Buffers	N.A.	
2.	Centre Buffer Coupler	M/s ESCORTS	PP END --- NPP END ---

### 6. AIRBRAKE TEST REPORT:

S NO	ITEM	DESCRIPTION	SPEC. VALUE	OBSERVED
1.	Full brake application	<ul style="list-style-type: none"> <li>➤ Reduce pressure of BP from 5.0 to 3.4 kg/cm<sup>2</sup>.</li> <li>➤ Max. pressure in BC</li> <li>➤ All Brake are applied</li> </ul>	6 – 10 sec. 3.0 ±0.15 kg/cm <sup>2</sup> . OK	10sec. 3.0 kg/cm <sup>2</sup> OK
2.	Insensitivity	<ul style="list-style-type: none"> <li>➤ Exhaust BP @ 0.3 kg/cm<sup>2</sup>/min.</li> </ul>	No brake application	OK
3.	Sensitivity	<ul style="list-style-type: none"> <li>➤ Exhaust BP @ 0.1 kg/cm<sup>2</sup>/Sec, after 02 Sec.</li> </ul>	Brake must apply	OK

### 7. PAINTING DETAILS:

S NO	DESCRIPTION	TYPE OF PAINT	MAKE	AVERAGE GLOSS VALUE
1.	Paint	P.U.	AKZO NOBEL	93.36/95.02
2.	Insulation	Satisfactory		



# रेल डिब्बा कारखाना, रायबरेली RAIL COACH FACTORY, RAEBARELI



FORM NO: RCF/RBL/QMF 8001  
VERSION: 2012-01-01

## ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: RCF/RBL/QC/RSC

Date: 07/06/2014

SHELL	L	W	A	C	C	N	3	0	5	0	/	2	0	1	3	DATE OF DISPATCH	0	4	0	3	2	0	1	4
RLY	S	R	Type	L	W	A	C	C	N	Coach No.	1	3	1	4	9	/	C							

### 8. DETAIL OF BOGIES :

ITEMS	PP SIDE				NPP SIDE			
Bogie No	136983				136982			
Bogie Type	Fiat				Fiat			
Axle No	T-2347		R-2155		R-3250		G-8617	
Wheel Dia	918.00	918.00	917.80	918.00	917.50	918.00	918.00	918.00
Wheel Disc No	041- 51281/ZB13	052- 51919/ZB13	138- 51919/ZB13	255- 51919/ZB13	092- 55757/ZB13	228- 51919/ZB13	197- 51777/ZB13	125- 48028/ZB13
R.B. Nos.	03268	03217	02757	02556	03057	02632	02872	02780
CT R B Make	TIM		TIM		TIM		TIM	

### 9. SECONDARY SUSPENSION LOAD DEFLECTION VALUES

DESCRIPTION	BOGIE PP SIDE				BOGIE NPP SIDE			
	SECONDARY 1		SECONDARY 2		SECONDARY 1		SECONDARY 2	
	OUTER	INNER	OUTER	INNER	OUTER	INNER	OUTER	INNER
Make & Nos.	CMGBD1 1-12-54	CMGBD1 1-12-82	CMGBD1 1-12-20	CMGBD1 1-12-90	CMGBD1 1-12-52	CMGBD1 1-12-38	CMGBD1 1-12-11	CMGBD1 1-12-116
Compressed Ht. at Tested Load	512	464	510	468	511	464	514	466
Alignment deviation (mm)	9	23	8	24	12	35	10	29

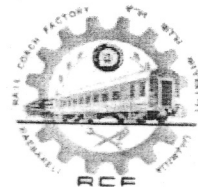
### 10. TRACEABILITY OF BOGIE ITEMS:

S NO	ITEM	SERIAL NO		MAKE
		PP SIDE	NPP SIDE	
1.	Primary outer Spring	CMGBD-11-12	CMGBD-11-12	CMGBD
2.	Primary Inner Spring	CMGBD-10-12	CMGBD-10-12	CMGBD
3.	Primary Damper			KONI
4.	Secondary Damper			SACHS
5.	Lateral Damper			GEREP
6.	Yaw Damper			SV SOCKS
7.	Brake Cylinder & Caliper	026K370,040K370,019K370,035K370	017K370,039K370,018K370,038K370	KBI
8.	Brake Disc			KBI
9.	Ball Joint Control Arm			SGA
10.	Lateral Bump Stop			GMT
11.	Ball Joint Traction Lever			SGA
12.	Traction Centre Elastic			SGA
13.	Secondary Rubber Pad			TECSPAK
14.	Rubber Spring			GMT
15.	Ball Joint Roll Link			JVR



# रेल डिब्बा कारखाना, रायबरेली

## RAIL COACH FACTORY, RAEBARELI



FORM NO: RCF/RBL/QMF 8001  
VERSION: 2012-01-01

### ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: RCF/RBL/QC/RSC

Date: 07/06/2014

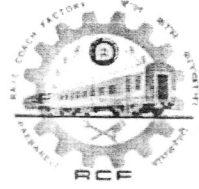
SHELL	L	W	A	C	C	N	3	0	5	0	/	2	0	1	3	DATE OF DISPATCH	0	4	0	3	2	0	1	4
RLY	S	R	Type	L	W	A	C	C	N	Coach No.	1	3	1	4	9	/	C							

### 11. TRACEABILITY OF FURNISHING ITEMS:

S NO	ITEM	MAKE/SUPPLIER	SERIAL NO
1.	Air Brake Module	M/s KBI, Faridabad, New Delhi	13L 0487
2.	Pull box	M/s KBI, Faridabad, New Delhi	
3.	DV	M/s KBI, Faridabad, New Delhi	2013L0921
4.	PVC	M/s Responsive, Colaba, Mumbai	
5.	UIC Vestibule (PPE)	M/s SUNCREST Kolkata	
6.	UIC Vestibule (NPPE)	M/s SUNCREST Kolkata	
7.	Foot Step	M/s JVR Ludhiana	
8.	Decoupling arrangement	M/s SECO	
9.	Body Side Window	M/s AIKON Tech.Pvt.Ltd Solan HP	
10.	Emergency Window	M/s AIKON Tech.Pvt.Ltd Solan HP	
11.	Lavatory Window	M/s AIKON Tech.Pvt.Ltd Solan HP	
12.	Roof Ceiling	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
13.	Non-AC Area Ceiling	M/s Rail Experts Jalandhar	
14.	Supply Air Duct	M/s Hanspal coach products kapurthala	
15.	Body Side Doors	M/s JVR Ludhiana	
16.	Compartment Door (PPE)	M/s Rail Tech, KXH	
17.	Compartment Door (NPPE)	M/s Rail Tech, KXH	
18.	Vestibule Door(PPE)	M/s JBM Faridabad	
19.	Vestibule Door(NPPE)	M/s JBM Faridabad	
20.	CDTS	M/s Darsan Enterprises, New Delhi	
21.	Auxiliary Water Tank	M/s Amit Engg, Mohali Punjab	
22.	Under Slung Water Tank(450 L)	M/s Shivalik Fasteners, Mohali Punjab	
23.	Under Slung Water Tank( 2X685L)	M/s Shivalik Fasteners, Mohali Punjab	
24.	Flexible Faucet	M/s Hindustan Fastenrs Ltd. Vadodra (Gujrat)	
25.	Lotah Filler Tap	M/s Metco (New Delhi)	
26.	Lavatory Modoules	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
27.	Lavatory Doors	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
28.	Waste Bin Arrangement	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
29.	Fire Extinguisher	M/s Hindustan Fibre Ltd. Vadodra (Gujrat)	
30.	Side Wall panel	M/s Hindustan Fibre Glass Ltd. Vadodra (Gujrat)	
31.	Seat & Berth	M/s Aarkay Foames Mohali	
32.	Light Luggage Rack	M/s Virendra Steel Enterprises Chandigarh	
33.	Snack Table	M/s International Tractor Ltd Hoshiarpur	



# रेल डिब्बा कारखाना, रायबरेली RAIL COACH FACTORY, RAEBARELI



FORM NO: RCF/RBL/QMF 8001  
VERSION: 2012-01-01

## ROLLING STOCK CERTIFICATE

Rolling Stock Certificate No.: RCF/RBL/QC/RSC

Date: 07/06/2014

SHELL	L	W	A	C	C	N	3	0	5	0	/	2	0	1	3	DATE OF DISPATCH				0	4	0	3	2	0	1	4
RLY	S	R	Type	L	W	A	C	C	N	Coach No.				1	3	1	4	9	/	C							

12.MODIFICATION (IF ANY) : NIL

13.DEVIATION (IF ANY) : NIL

14.ITEM FITTED ON THE COACH ON TRIAL : NIL

S NO	ITEM PARTICULARS	PURPOSE	REPORT Frequency	REFERENCE & PERIOD OF TRIAL

### 15. WARRANTY:

S NO	COMPONENTS	WARRANTY
1	Brake blocks, wheels, push gravity cocks, flushing valves, moldings, window glasses, mirrors, roller blinds, curtain & bulbs etc. ( items which are consumable in nature)	NIL
2	Other coach furnishing sub assemblies(bought out items)	24 months date of dispatch of coach or 30 months from date of supply of material whichever is earlier.

#### NOTE:

- This warranty covers free supply of parts which wear out and falls within warranty period of normal service.
- This doesn't covers faults arising out of accident, non standard maintenance practices, abnormal use or mishandling, vandal activity, arson & deficient/pilferage etc.
- This doesn't cover any consequential liabilities or damages/loss incurred by anybody; furthermore, it shall in no case extend to repayment, return of the coach or replacement of complete coach.
- Whether a defective part is to be replaced or repaired shall be at the discretion of RCF/RBL.
- For any complain/ suggestion please contact at qualityrcfrbl@gmail.com

DY CME

RCF/RBL

Dy CME/For  
उप मु० या० अमि०/फर.  
RCF/RBL(LLJ)  
रे. डि.का. रायबरेली (लालगंज)

सीनियर सेक्शन इंजीनियर (क्वालिटी कंट्रोल)  
रेल डिब्बा कारखाना, रायबरेली  
Sr Section Engineer (Quality Control)  
Rail Coach Factory, Raebareli(Lalganj)

# RAIL COACH FACTORY, KAPURTHALA

L3T-85

Form No. : QMF 9454; Version: 03

Page : 2 of 4

Date: 30-10-2013

Shell No.: RCF/RBL

RLY	Type	LACCN	Coach No.
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## 6.0 Wheel & Axle details:

Items	PP Side				Non PP Side			
Bogie No.	136982				136983			
Frame No.	FIAT-2636				FIAT-2648			
Bolster No.	044HEI				043HEI			
Axle No.	R-3250		G-8617		T-2347		R-2155	
Wheel Diameter	917.50	918.00	918.00	918.00	918.00	918.00	917.80	918.00
Wheel Disc No.	092-55757/ ZB13	228- 51919/ ZB13	197- 51777/ ZB13	125- 48028/ ZB13	041- 51281/ ZB13	052- 51919/ ZB13	138- 51919/ ZB13	255- 51919/ ZB13
R.B. Nos.	03071	02632	02872	02780	03268	03217	02757	02556
R. B. Make	TIM		TIM		TIM		TIM	
RB Type	CARTRIDGE TAPER ROLLER BEARING							

## 6.1 Secondary suspension load deflection Values:

Description	Bogie PP side				Bogie NPP side			
	Secondary 1		Secondary 2		Secondary 1		Secondary 2	
	Outer	Inner	Outer	Inner	Outer	Inner	Outer	Inner
Make & nos.	CMGBD11 -12-52	CMGBD1 1-12-38	CMGBD1 1-12-11	CMGBD1 1-12-116	CMGBD1 1-12-54	CMGBD1 1-12-82	CMGBD11 -12-20	CMGBD1 1-12-90
Compressed ht. at tested load	511	464	514	466	512	464	510	468
Alignment deviation (mm)	12	35	10	29	9	23	8	24

## 6.2 Component traceability:

SNO	ITEM	PP Side Bogie	NPP side Bogie	Make
1	Primary Outer Spring batch no.	CMGBD-11-12	CMGBD-11-12	CMGBD
2	Primary inner Spring batch no	CMGBD-10-12	CMGBD-10-12	CMGBD
3	Primary Damper			KONI
4	Secondary damper			SACHS
5	Lateral Damper			GEREP
6	Brake cylinder & Caliper			---
7	Brake Disc			KBI
8	Ball joint Control arm			SGA
9	Lateral Bump stop			GMT
10	Traction center make			SARITA
11	Traction lever make			SARITA
12	Ball joint traction lever			SGA
13	Ball joint Traction centre			SGA
14	Secondary rubber pad			TECSPAK
15	Rubber spring			GMT
16	Anti roll bar make			SARITA
17	Roll link make			JVR
18	Fork make			EMSON

AS  
JNT/14  
SSE/AC/14/14

RCF

L3T-85



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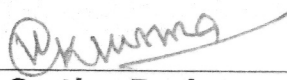
PAGE 1 OF 5

**FOR ELECTRICAL ITEMS**

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

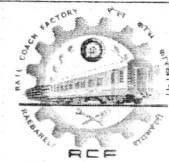
ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB/EOG AC COACHES				
TYPE COACH		LWACCN	SHELL/COACH NO	13149/C
RAILWAY		SR	DATE OF DESPATCH	
Sr no	Description of tests			Remarks
1.0	REFERENCE SPECIFICATION : L 446			
1.1	AIR CONDITIONING TEST : ELPS/TP/AC 01.			
1.2	CODE OF PRACTICE OF WIRING : ELPS/SPEC/EOG/AC-01			
2.0	INSULATION RESISTANCE : Setting of insulation monitoring relay at 30K ohms as per TD 111 of M/s LHB.			
	Observed status : HEALTHY			
3.0	AIR DELIVERY MEASUREMENT	OBSERVED VALUE		OK
3.1	Fresh Air	29.32 Cub mtr/min		OK
3.2	Return Air	60.15 Cub mtr/min		OK
3.3	Exhaust Air	6.82 Cub mtr/min		OK
3.4	Conditioned Air	204.90 Cub mtr/min		OK
4.0	PRE COOLING TEST : Max 01 hr. Time taken to pre cool from 45 deg centigrade to 24/22 deg C during OFF LOAD condition .			OK
	Not done due to ambient temperature below 22 deg.C.			
5.0	PULL DOWN TEST : Max 02 hrs. Time taken to pull down from 45 deg C to 24/22 deg C during FULL LOAD condition .			OK
	Not done due to ambient temperature below 22 deg.C.			

  
**Senior Section Engineer**  
**Quality control / Electrical**  
**RCF, Raebareli**



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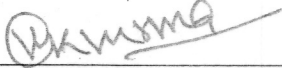
**FOR ELECTRICAL ITEMS**

ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

ELECTRICAL TEST CERTIFICATE FOR LHB EOG AC COACHES

Sr no	Description of test	Remarks
6.0	HUMIDITY CONTROL	OK
7.0	PUMP EQUIPMENTS	OK
8.0	WORKING OF EXHAUST FANS OVER LAVATORIES	OK
9.0	WORKING OF COMPOSITE PANTRY	OK
10.0	COMPARTMENT LIGHT	OK
11.0	PUBLIC ADDRESSING SYSTEM ( PAS )	OK
12.0	WHEEL SLIDE PROTECTION SYSTEM ( WSP )	OK
13.0	WORKING OF 60KVA TRANSFORMER	OK
14.0	WORKING OF REGULATED BATTERY CHARGER	OK
15.0	WORKING OF EMERGENCY BATTERY CHARGER	OK
16.0	SAFETIES :	OK
16.1	THERMOSTAT :	OK
16.2	ROTARY 07 SET POINTS (NORMAL CONDITION)	OK
16.3	MID SET POINTS (SENSORS FAILED CONDITIONS)	OK
16.4	HYGROSTAT	OK
16.5	CONTROL CIRCUIT	OK
16.6	POWER CIRCUIT	OK
17.0	REFRIGERANT USED	OK

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Senior Section Engineer  
Quality control / Electrical  
RCF, Raebareli



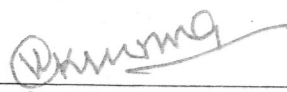
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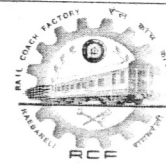
ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
01.	Roof mounted AC package unit for LHB AC coaches Make : <b>INTEC</b> Sr no of RMPU (NPP side ) : <b>14-A-016</b> Sr no of RMPU (PP side ) : <b>14-A-017</b> Sr no of CPU: <b>AE-14-01-042/AMIT</b>	EDTS 075,Rev-c Col I.	<b>02</b>
02.	Switch board cabinet Make: <b>ISG</b> Sr no : <b>0059-13/2011</b>	EDTS 073 ,Rev -d	<b>01</b>
03.	Pump equipment with PLC controller & pump box Make: <b>KIND</b> Sr no: <b>050888</b> Sr no.1 : <b>30505255</b> Sr no.2 : <b>30505256</b> Pump controller Sr no: <b>1305050</b>	EDTS 094,Rev`a`	<b>01</b>
04.	Double inlet centrifugal blower 415V/03Ph /50Hz /120W/450 cum mtr/hr discharge for exhausting air from lavatory & switch board cabinet Make : <b>INTEG</b>	Cat no D2D 133 -AB06-19 of EBM or equivalent approved	<b>02</b>
05.	Vestibule Light Fitting Single	LW 76004,Alt-b	<b>07</b>
06.	Ceiling light fitting DOUBLE w/o diffuser.	LW 76011,Alt -c	<b>09</b>
07.	Ceiling light fitting with NL w/o diffuser w/o item 2&3	LW 76013,Alt -c	<b>09</b>
08.	Emergency light system for EOG type coaches (AEL)	EDTS 151,Rev-c	<b>04</b>
09.	Lavatory light fitting assly	LW 76001,Alt nil	<b>04</b>
10.	WC gauge signal light	LW 76006,Alt-c	<b>02</b>

  
Senior Section Engineer  
Quality control / Electrical  
RCF, Raebareli



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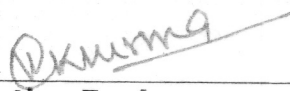
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ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES

Sr no	Description	Drg/Spec no.	Quantity per Coach
11.	Passenger alarm coach indication light	LW 76005,Alt-d	02
12.	Fluorescent lamp 18W	RDSO/PE/SPEC/ D/TL 0011- 2000,Rev I, Sec- I, 07/2001	34
13.	Diffuser complete w/o item 1& 2.	LW 76012,Alt-a	25
14.	Razor socket for WC 110/240V.	EDML 047 ,Rev nil	04
15.	Terminal strip	EDML 034,Rev-a	01
16.	Terminal connector	EDML 037,Rev`a`	04
17.	Single switch 06A/250V/AC ONE WAY ,complete with steel plate & cover frame	EDML 047,Rev nil, Item 1.	09
18.	Single switch 16A/250V/AC ONE WAY complete with steel plate & cover frame	EDML 045,Rev nil ,Item 2.	09
19.	PA system for LHB coaches Make :AHUJA	EDTS 173,Rev-a Am-1,2&3	01 set
20.	70AH/110V,54 Cells,02V each ,maintenance free pure lead acid tin monoblock ,battery set with 09 modules 12V each. , factory pre charged. Make :A.RAJA Lug date :05/2013	EDTS 129,Rev nil	01 set
21.	Battery box for LHB coaches.	1 10113 0 76 700 005 w/o item 5,22 ,23 ,26 & 27.	01

  
Senior Section Engineer  
Quality control / Electrical  
RCF, Raebareli



**Govt. of India- Ministry of Railways  
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RCF/RBL/QEF7001

VER.2012:00

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**ROLLING STOCK CERTIFICATE OF LHB/EOG AC COACHES**

Sr no	Description	Drg/Spec no.	Quantity per Coach
22.	Battery fuse box +ve Make : <b>NEC</b>	LW 71001,Alt`d	<b>01</b>
23.	Battery fuse box -ve Make : <b>NEC</b>	LW 71002,Alt-d	<b>01</b>
24.	Regulated battery charger Make : <b>AUTOMETER</b> Sr no: <b>BCH061309016</b>	EDTS 074,Rev -c Corr.1	<b>01</b>
25.	Emergency battery charger Make : <b>BHASIN</b> Sr no: <b>BC0313031</b>	EDTS 163,Rev `c` corg.-2&3	<b>01</b>
26.	60KVA transformer Make : <b>VIMAL</b> Sr no 1: <b>2018-2013/14</b>	EDTS 076 ,Rev-b Am-1	<b>01</b>
27.	ZS coupling 400A/750V/03Ph/50hz. Make : <b>S INTERNATIONAL</b>	EDTS 105,Rev-e Am-1,2 Corr.1	<b>02 sets</b>
28.	Feeder junction boxes. Make : <b>NEC</b>	EDML 020,Rev-e	<b>02</b>
29.	Wheel set earthling equipment. Make : <b>CHANDA &amp; CHANDA</b>	EDTS 101,Rev-c	<b>02</b>
30.	Wheel Slide Protection System (WSP) Make: <b>KNORR</b> & Sr no : <b>0113380849</b>	M/s : <b>KNORR</b>	<b>01 set</b>
31.	PANTRY EQUIPMENTS : Hot Case & Bottle cooler cum deep freezer Make : <b>VISHAL GAS SERVICE</b>	EDTS -139 Rev- Nil, Am-1,2,3&4	<b>01</b>

<b>SEE/RCF/RBL</b>	<b>SSE/EL/QC</b>

वरिष्ठ विद्युत अभियन्ता  
रेल कोच फैक्टरी, रायबरेली, लखनऊ  
Sr. Electrical Engineer / RCF / RBL / Lucknow

वरिष्ठ खण्ड अभियन्ता  
विद्युत उत्पादन-गुणवत्ता  
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