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Atualizado em 28.09.2018

Art. 1 - VIATURAS ADMITIDAS

As constantes no quadro seguinte detentoras de ficha de homologação FIA / FPAK e suas extensões, válidas para o ano em curso e ainda as viaturas em conformidade com o art.2.7.1.c do CDI.

VIATURAS ADMITIDAS NO CAMPEONATO NACIONAL de RALIS 2018						
Grupo	Descritivo		Regulamento	Peso Min (Kg)	Bride Max. (mm)	
RC2	R5 (VR5)		Art. 261 - Anexo J	1230	32	
	S2000 (2.0 atmosférico)		Art. 254A - Anexo J 2013	1200	64 ± 0.25	
	R4-KIT		Art. 260E - Anexo J	1230	33	
RC2N	R4 (VR4) não elegível para provas internacionais FIA (Europa)		Art. 260 - Anexo J	1300	33	
	Grupo N + de 2000 cm ³ (nominal)		Art. 254 - Anexo J	FH *	- / 33	
RGT (FIA)	RGT (FIA)		Art. 256 - Anexo J	PT RGT (FIA) **	PT RGT (FIA) **	
RC3	Grupo A + de 1600 cm ³ a 2000 cm ³ (nominal)		Art. 255 - Anexo J	Art. 255-4.1	- / 34	
	(VK)-S1600		Art. 255 - Anexo J	1000	60 ± 0.25	
	R2 (VR2C)	Atmosf. (cm ³ /nominal)	Turbo (cm ³ /nominal)	Art. 260 - Anexo J	1080	-
	R3 (VR3C)	+ 1600 a 2000	+ 1067 a 1333			-
	R3 (VR3T) Turbo até 1620 cm ³ (nominal)		Art. 260D - Anexo J	1080	29	
	R3 (VR3D) Turbo até 2000 cm ³ (nominal)			1150	32	
RC4 ¹⁾	Grupo A até 1600 cm ³ (nominal)		Art. 255 - Anexo J	Art. 255-4.1	-	
	R2 (VR2B)	Atmosf. (cm ³ /nominal)	Turbo (cm ³ /nominal)	Art. 260 - Anexo J	1030	-
		+ 1390 a 1600	+ 927 a 1067			
	Kit Car (VK) até 1600 cm ³		Art. 255 - Anexo J	Art. 255-6.2	-	
	Grupo N: + de 1600 cm ³ até 2000 cm ³		Art. 254 - Anexo J	FH *	-	
RC5 ¹⁾	Grupo N até 1600 cm ³		Art. 254 - Anexo J	FH *	-	
	R1 (VR1A)	Atmosf. (cm ³ /nominal)	Turbo (cm ³ /nominal)	Art. 260 - Anexo J	980	-
		Até 1390	Até 927			
	R1 (VR1B)	Atmosf. (cm ³ /nominal)	Turbo (cm ³ /nominal)	Art. 260 - Anexo J	1030	-
+ 1390 a 1600		+ 927 a 1067				

* conforme o peso mencionado na ficha de homologação

** conforme passaporte técnico RGT (FIA)

Art. 2 - PESOS

2.1 - O peso mínimo da viatura é considerado: sem 1º condutor e 2º condutor/navegador, sem o respetivo equipamento e com no máximo uma roda sobressalente, conforme quadro acima.

No caso em que duas rodas sobressalentes são transportadas na viatura, a segunda roda terá de ser retirada antes de efetuar a pesagem.

2.2 - O peso mínimo da viatura nas condições do Art. 255-4.1; 260-201.3 & 4 & 5; 260D-201.3 & 4; 260E-201.4 e 261-201.4 quando com a equipa a bordo (piloto + copiloto + equipamento completo) é definido pelo quadro acima +160 Kg.

Para S1600 e Kit-Car até 1600 cm³, (Art. 255-6-2) é definido pelo quadro acima +150 Kg.

2.3 - A utilização de lastro é autorizada de acordo com o Art. 252-2.2 do Anexo J.

Art. 3 - EQUIPAMENTO SEGURANÇA

3.1 - Viatura - conforme o disposto no Art. 253 do Anexo J.

3.2 - 1º condutor e 2º condutor/navegador

3.2.1 - Capacetes - com homologação válida e em conformidade com o disposto pelo Anexo L ao CDI, Capítulo III - Art. 1. Normas FIA standard (lista técnica FIA nº 25) e/ou normas FIA 8860-2004 ou FIA 8860-2010 (lista técnica FIA nº33), FIA 8858 (lista técnica FIA nº 41) e FIA 8859 (lista técnica FIA nº49).
Lista técnica "Capacetes-Extensão de Validade" FPAK **só para provas Nacionais.**

3.2.2 - Fato de competição, roupa interior; balaclava; luvas e sapatos - com homologação válida e em conformidade com o disposto pelo Anexo L ao CDI, Capítulo III Art. 2 - norma FIA 8856-2000 (lista técnica FIA nº 27). Não é obrigatório o uso de luvas para o copiloto.

3.2.3 - Sistema de retenção de cabeça (HANS-FHR) - com homologação válida e em conformidade com o disposto pelo Anexo L ao CDI, Capítulo III - Art. 3. Normas FIA 8858-2002 e/ou FIA 8858-2010 (lista técnica FIA nº 29). (**consultar Anexo I - compatibilidade**)

Art. 4 - PNEUS

4.1 - Roda de reserva - em cada prova será obrigatória a instalação de pelo menos um pneu suplente devidamente fixado no carro, controlável em qualquer momento da prova.

4.2 - Tipo de pneus a utilizar nas Super Especiais (SE) - os pneus a utilizar nas SE, serão obrigatoriamente do mesmo tipo de piso que corresponda ao das restantes PEC's que integrem essa Prova, conforme Art. 13.7.3 das PER.

4.3 - Para asfalto - é proibido o uso de pneus *slick* conforme Art. 13.3 das PER.

É obrigatório a utilização de pneus *moulés* (moldados) em conformidade com a lista, constante **no (Anexo III)** e cujo desenho do piso é apresentado no **(Anexo IV)** abaixo.

A lista dos pneus homologados pode sofrer alterações e/ou atualizações.

Todos os pneus devem estar em conformidade com o Anexo V das Prescrições Específicas dos Campeonatos de Ralis FIA e apresentarem os códigos de barras de identificação FIA.

É proibido utilizar qualquer dispositivo para aquecer os pneus depois de montados nas suas jantes.

É proibido alterar o desenho original do piso quer seja por corte ou recorte (**consultar Anexo IV**).

4.4 - Para terra - os pneus de terra são livres contudo não é permitido alterar o desenho original do piso quer seja por corte ou recorte e apresentarem os códigos de barras de identificação FIA.

4.5 - Dispositivo que permite o pneu conservar a sua performance - é proibido a utilização de qualquer dispositivo que permita regular a pressão dos pneus, aquando da viatura em movimento.

4.6 - Marcação / Limite a utilizar

- Na primeira prova de cada piso (asfalto ou terra) são autorizados dez pneus novos que serão objecto de marcação.

- Nas provas seguintes os pneus são marcados e limitados a um máximo por prova de até oito novos + dois usados (marcados em provas anteriores).

NOTA:

a) considera-se pneu novo, independentemente do seu aspecto físico, aquele que é marcado pela primeira vez.

b) considera-se pneu usado, independentemente do seu aspecto físico, aquele que já foi objecto de marcação em prova(s) anterior(es).

- Exclusivamente para as Super Especiais das provas em piso de terra, os pneus utilizados não são marcados.

4.6.1 - Provas Internacionais - que integram o CPR nestas o procedimento, para a marcação de pneus segue a regulamentação própria dos campeonatos onde se inserem.

Art. 5 - CÂMARAS FILMAR

5.1 - Instalação - a instalação da (s) câmara (s) de filmar tem de estar em conformidade com o disposto no menu Técnica → (Listas Técnicas) → Câmaras de Filmar, no site da FPAK.

Art. 6 - SELAGEM TURBOCOMPRESSOR (VULGO TURBO)

6.1 - É obrigatório para as viaturas com turbocompressor (vulgo Turbo), que nas VTI o "Turbo" esteja em conformidade e respeite a localização dos pontos de passagem do fio de selagem conforme se descreve no **Anexo II**.

ACTUALIZAÇÕES

Art. / Data	Estado	Art. / Data	Estado	Art. / Data	Estado
Anexo III / 21.02	Actualizado	Anexo IV / 21.02	Actualizado	Anexo III / 28.03	Novo
Anexo IV / 28.03	Novo	Anexo III / 28.09	Atualizado		

ANEXO III

PNEUS DE ASFALTO SEGUNDO LISTA CPR 2018

(...../.....)

Anexo III

HANKOOK		
16"	180 / 600 R16	VENTUS Z205
17"	180 / 625 R17	VENTUS Z205
18"	210 / 650 R18	VENTUS Z210

(...../.....)

(...../.....)

KUMHO TYRES 

18" - 210/645R18

VÁLIDO ATÉ 31.12.2017

Anexo IV

(...../.....)

KUMHO TYRES 

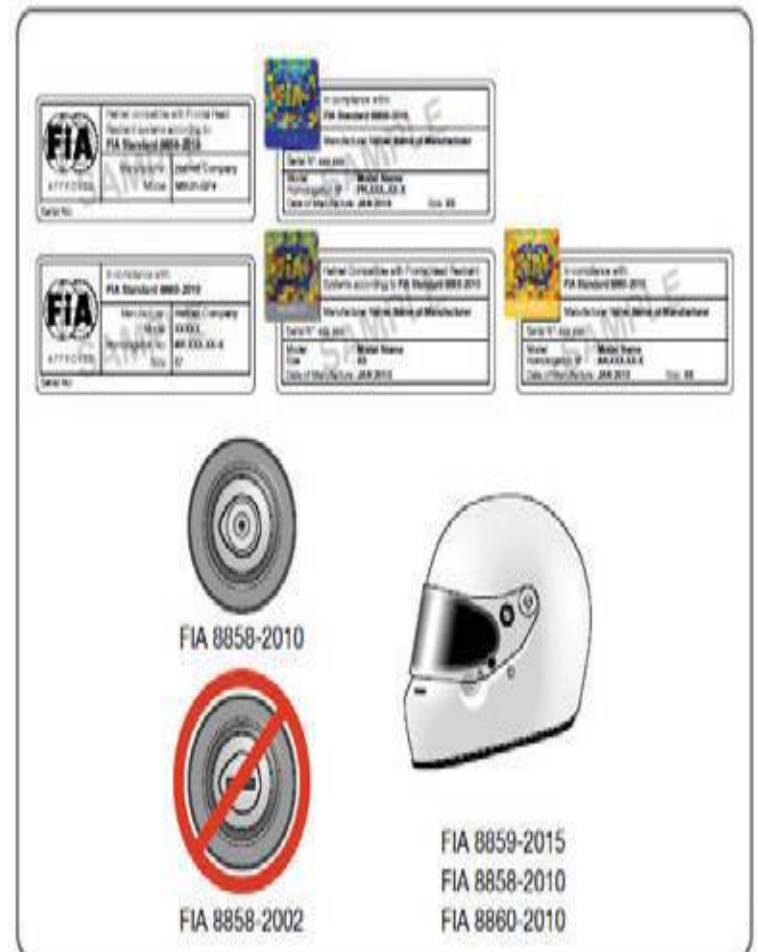
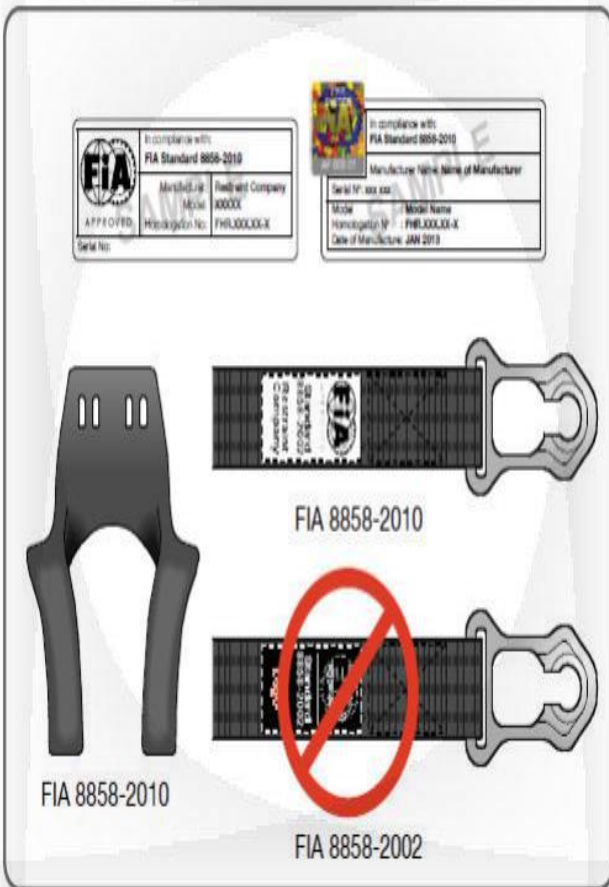
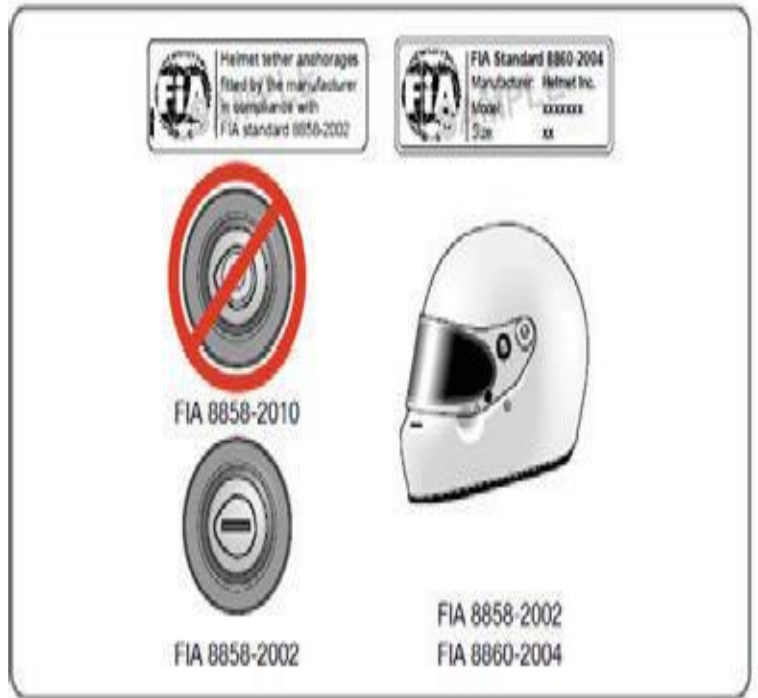
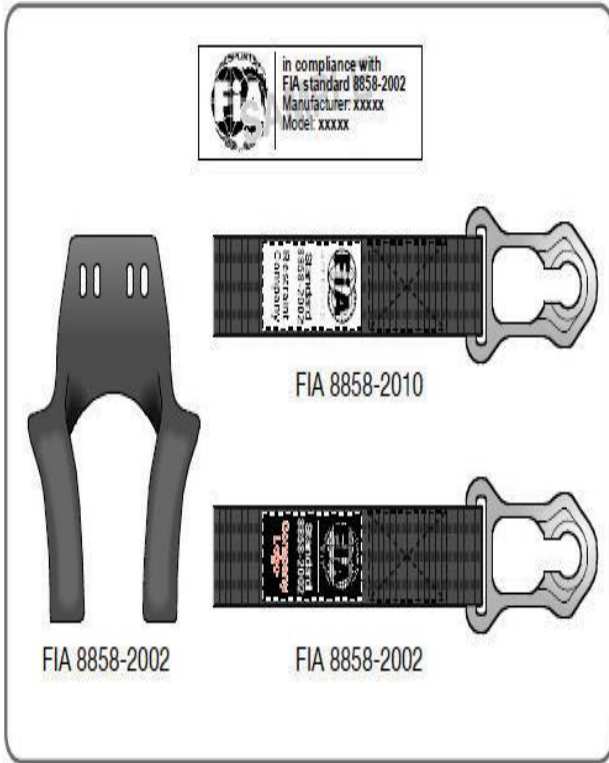
17" - 210/645R17

VÁLIDO ATÉ 31.12.2017

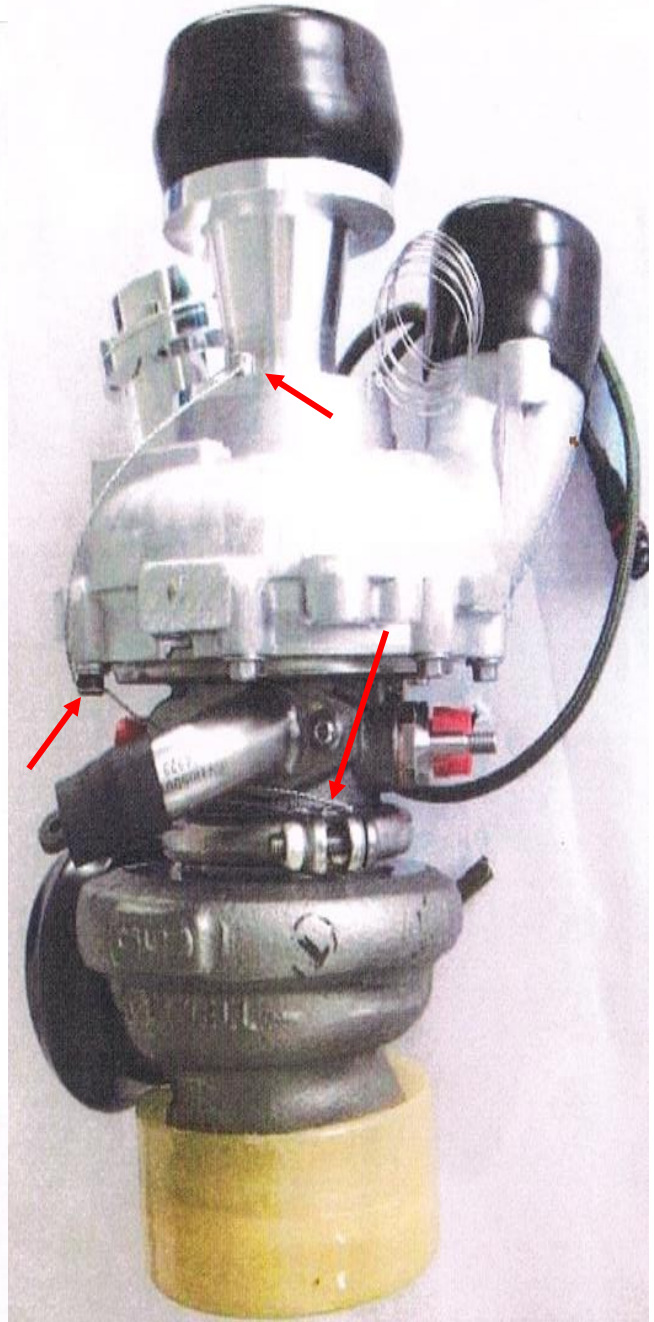
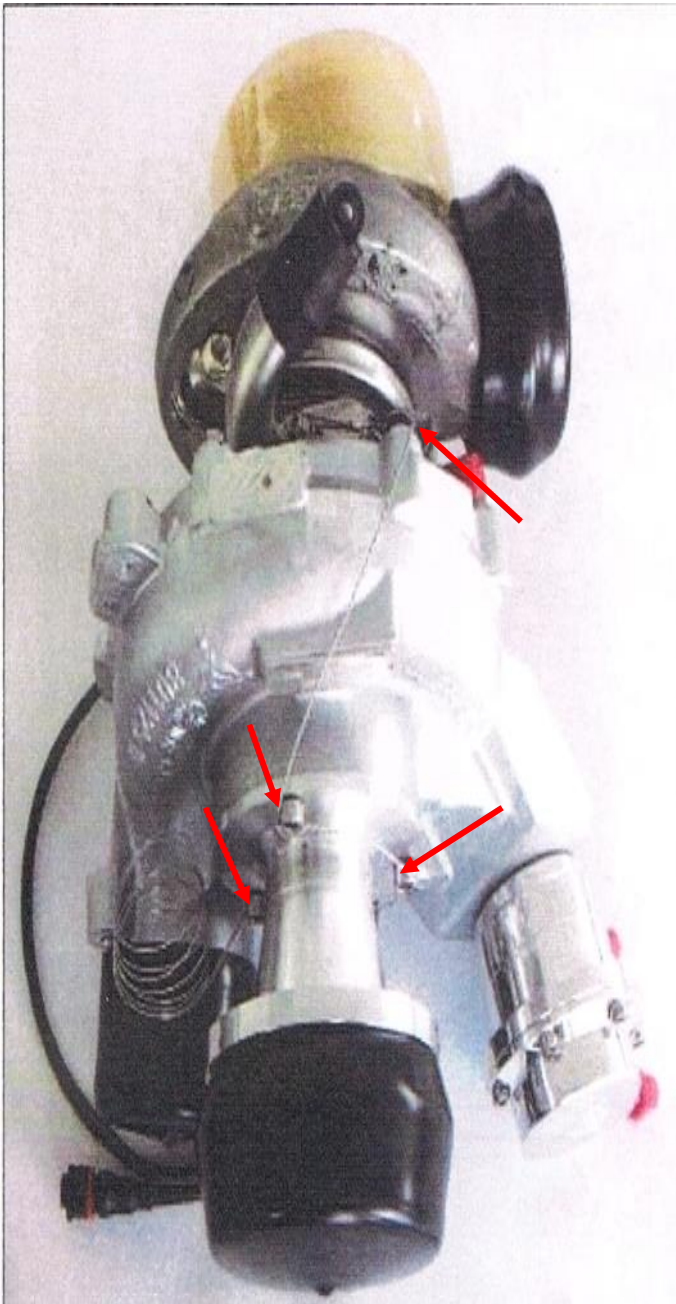
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ANEXO I

COMPATIBILIDADE CAPACETES SISTEMA (HANS-FHR)

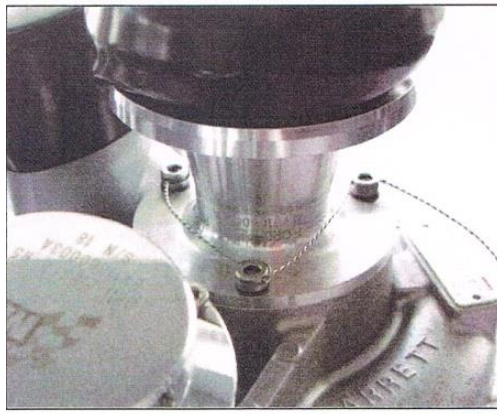


ANEXO II
SELAGEM DO TURBOCOMPRESSOR (TURBO)



ZOOM DE PONTOS DE PASSAGEM DO FIO DE SELAGEM

LADO DO COMPRESSOR



LADO DA TURBINA



ANEXO III
PNEUS DE ASFALTO SEGUNDO LISTA CPR 2018

MICHELIN		
JANTE	MEDIDA	TIPO
15"	19 / 58 -15	Pilot Sport R
16"	19 / 60 -16	Pilot Sport R
17"	19 / 63 -17	Pilot Sport R
18"	20 / 65 -18	Pilot Sport R
18"	18/ 65 - 18	Pilot Sport FW3(WRC Wet)
18"	24 / 65 -18	Rally Asfalt - RGT-FIA(frnt.drt)
18"	24 / 65 -18	Rally Asfalt - RGT-FIA(frnt.esq)
18"	24/ 65-18	Rally Asfalt – RGT-FIA
18"	29 / 65 -18	Rally Asfalt - RGT-FIA(tras drt)
18"	29 / 65 -18	Rally Asfalt - RGT-FIA(tras esq)
18"	29 / 65-18	Rally Asfalt - RGT
DMACK		
14"	175 / 60-14	DMT-RC
15"	195 / 50-15	DMT-RC
15"	195 / 50-15	DMT-RC2
16"	195 / 50-16	DMT-RC
16"	195 / 50-16	DMT RC2
17"	195 / 50-17	DMT-RC
17"	205 / 45-17	DMT-RC2
17"	225 / 45-17	DMT-RC
18"	225 / 40-18	DMT-RC2
18"	225 /40-ZR18	DMT-RC
18"	225 / 40-18	DMT-RC22
18"	225 / 40-18	eWet
PIRELLI		
15"	195 / 50-15	RK
16"	195 / 50-16	RW
16"	195 / 50-16	RK
17"	205 / 45-17	RK
18"	235 / 40-18	RA
18"	235 / 40-18	RK
18"	235 / 40-18	RW
YOKOHAMA		
15"	190 / 580-15	ADVAN A051T
16"	190 / 600-16	ADVAN A051T
17"	190 / 625-17	ADVAN A051T
17"	210 / 625-17	ADVAN A051T
18"	235 / 40-18 (210 / 650 R18)	ADVAN A051T
HANKOOK		
15"	200 / 580R15	VENTUS Z205
16"	180 / 600 R16	VENTUS Z205
17"	210 / 625R17	VENTUS Z205
17"	180 / 625 R17	VENTUS Z205
18"	210 / 650 R18	VENTUS Z205

18"	210 / 650 R18	VENTUS Z210
KUMHO TYRES		
15"	180 / 580 R15	TM 02
16"	190 / 600 R16	TM 02
17"	190 / 630 R17	TM 02
17"	210 / 645 R17	TW 02
18"	210 / 645 R18	TM 01
18"	210 / 645 R18	TM 02
18"	210 / 645 R18	TM 02
18"	210 / 645 R18	TW 02
HOOSIER RACING TIRE		
15"	185 / 580 R15	ROAD RALLY
16"	195 / 50R16	TARMAC RALLY
17"	195 / 50R17	TARMAC RALLY
18"	200 / 650 R18	ROAD RALLY
TOYO TIRES		
15"	185 / 580 R15	PROXES 888RT
18"	205 / 640 R18	PROXES 888RT
MRF TYRES		
15"	195 / 50 R15	ZTA1 TL
16"	195 / 50 R16	ZTA1 TL
17"	205 / 45 R17	ZTA1 TL
18"	235 / 50 R18	ZTA1 TL

ANEXO IV

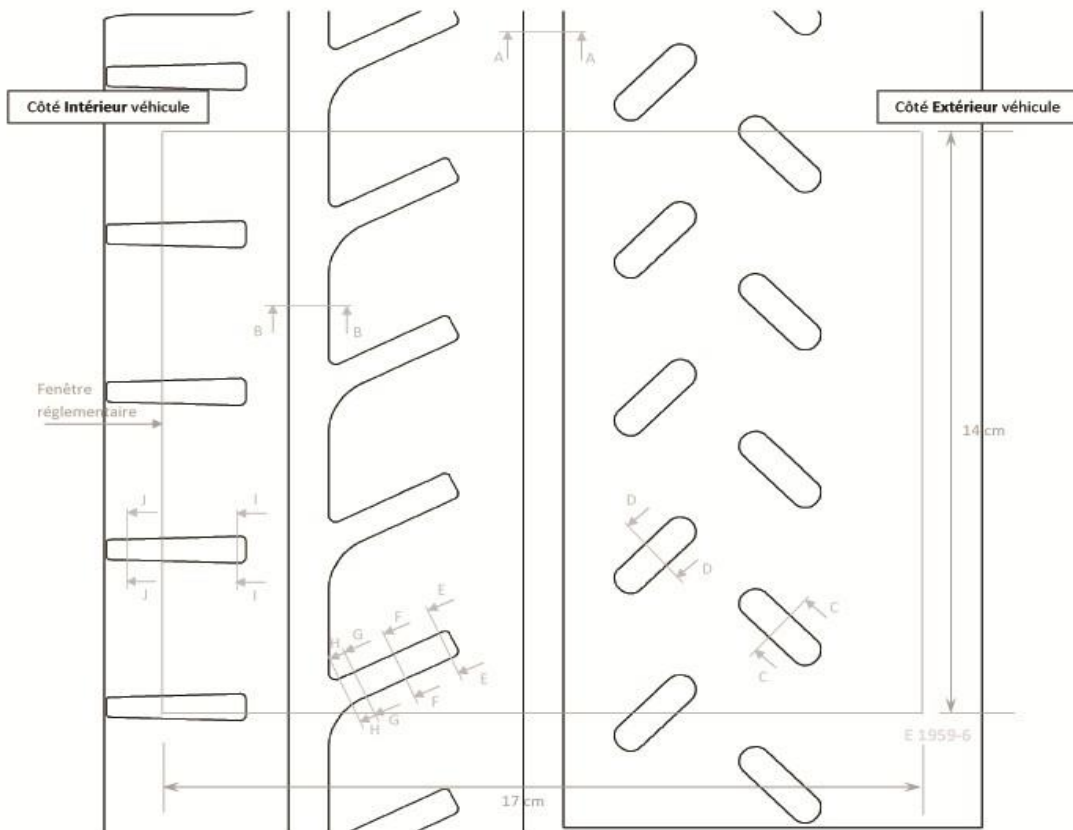
DESENHOS DO PISO DOS PNEUS DE ASFALTO LISTA CPR 2018

18" - 20/65-18

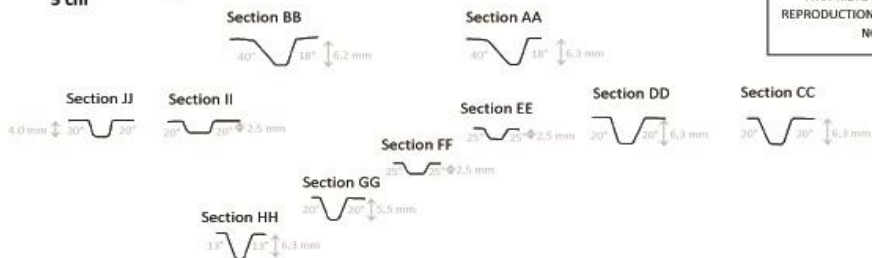


Domaine : Rallye Asphalte
 Dimension : 20 / 65 – 18
 Plan de la sculpture : Pilot Sport R
 Entaillement Surfamique dans fenêtre réglementaire : 21,51 %

Clermont-Ferrand le 05/12/2013



Echelle 1:1
 5 cm



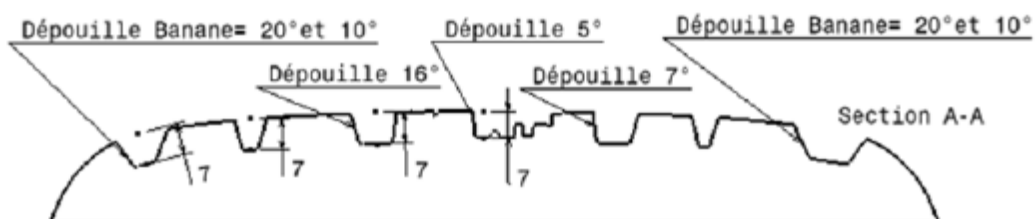
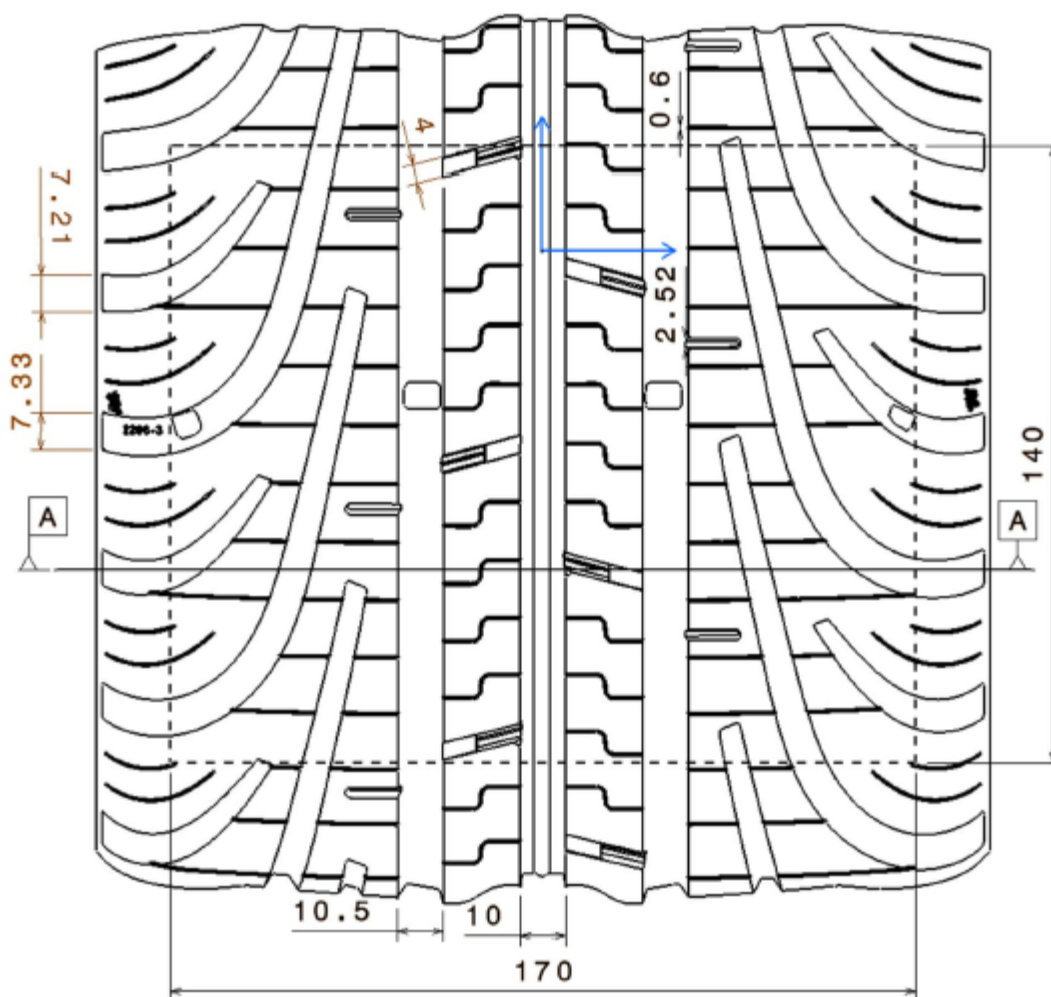
MANUFACTURE FRANCAISE DES PNEUMATIQUES
 MICHELIN CLERMONT-FERRAND
 PROPRIETE EXCLUSIVE DE NOTRE SOCIETE
 REPRODUCTION OU UTILISATION INTERDITE SANS
 NOTRE ACCORD ECRIT

18" - 18/65-18



Clermont-Ferrand le : 15/12/2016
Domaine : Rallye Asphalte WRC Wet
Dimension : 18 / 65 - 18
Plan de la sculpture : Pilot Sport FW3
Entaillement Surfaccie sur entaille $\geq 5,5\text{mm}$ de profondeur : 27.5%

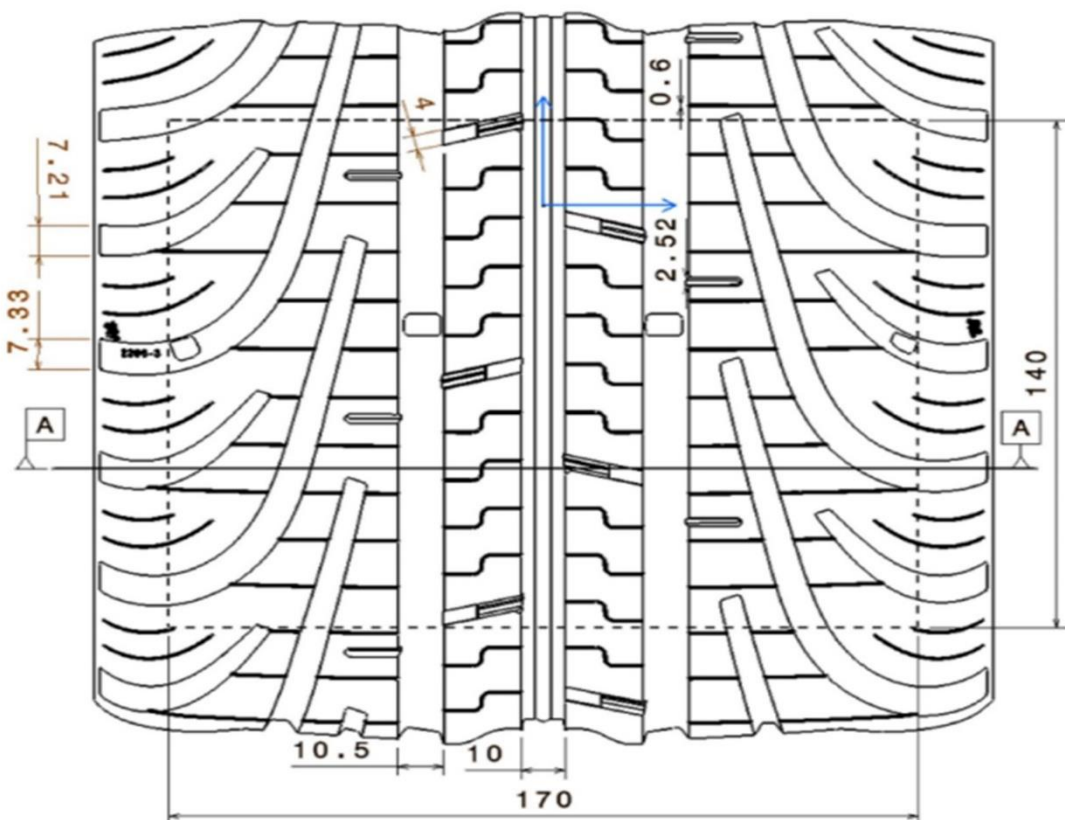
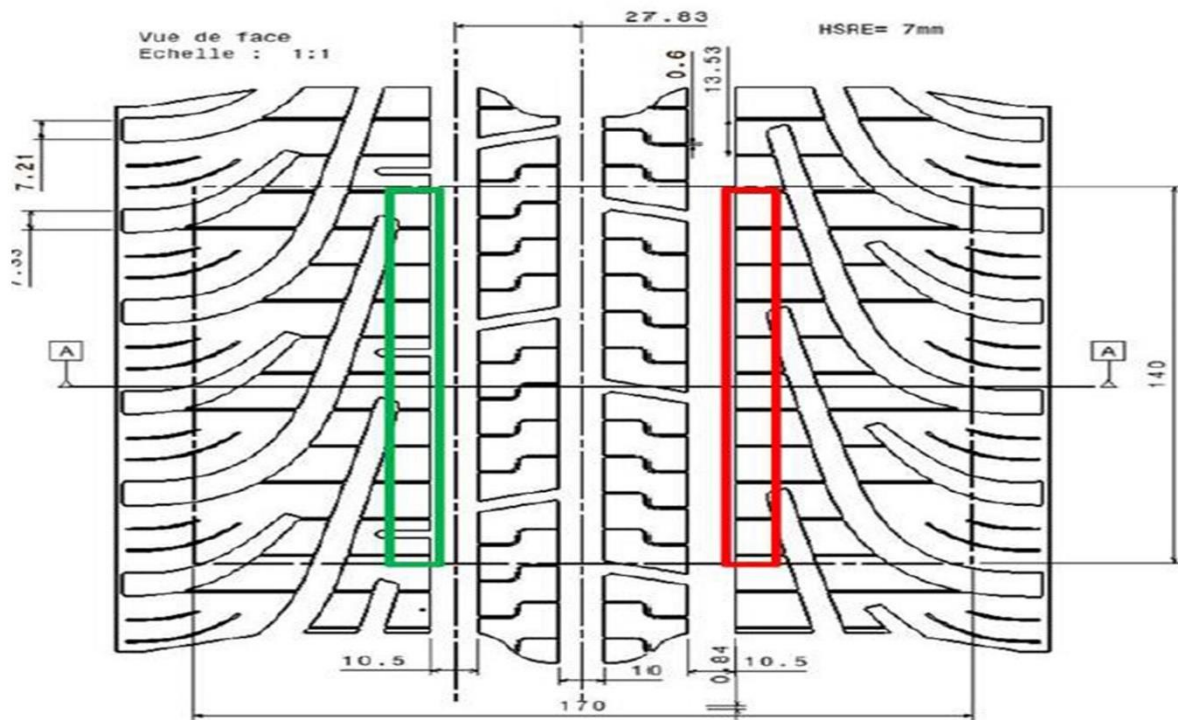
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NOTRE ACCORD ECRIT



18" - 18/65-18



VÁLIDO ATÉ 31.12.2017

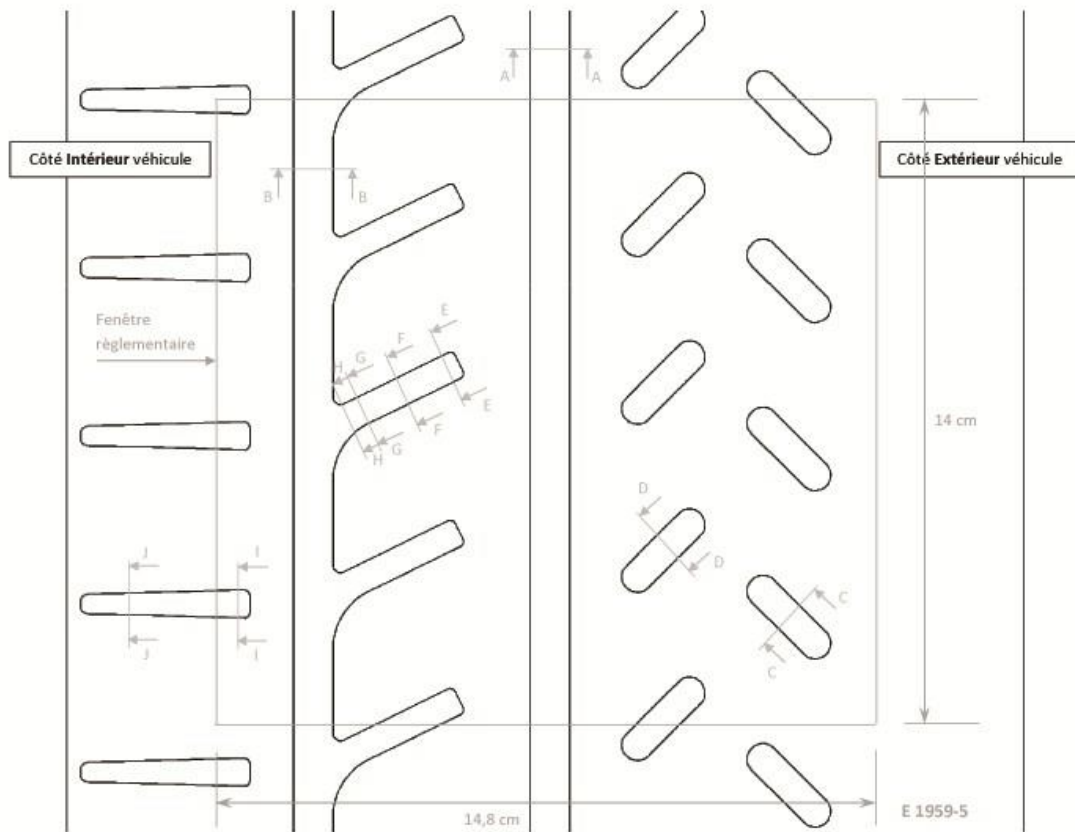


17" - 19/63-17

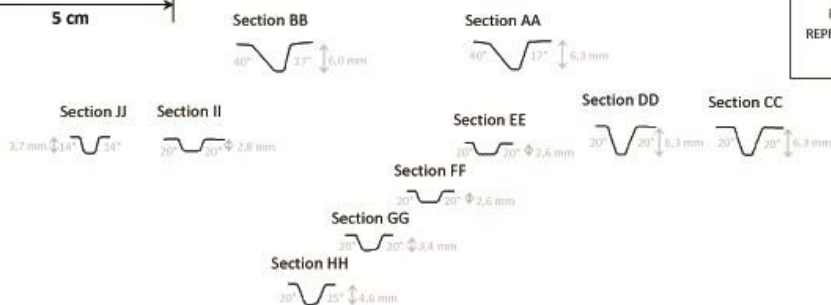


Domaine : Rallye Asphalte
 Dimension : 19 / 63 – 17
 Plan de la sculpture : Pilot Sport R
 Entaillement surfacique sur fenêtre réglementaire : 21,51 %

Clermont-Ferrand le 05/12/2013



Echelle 1:1
 5 cm



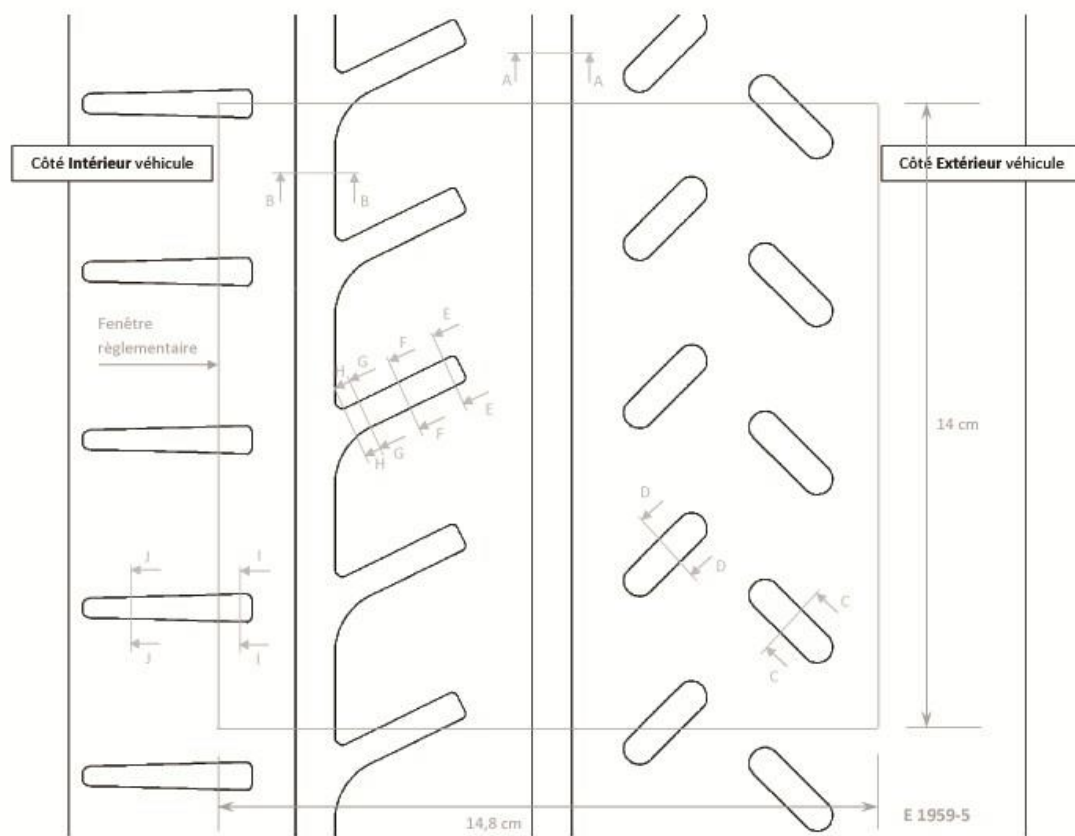
MANUFACTURE FRANCAISE DES PNEUMATIQUES
 MICHELIN CLERMONT-FERRAND
 PROPRIETE EXCLUSIVE DE NOTRE SOCIETE
 REPRODUCTION OU UTILISATION INTERDITE SANS
 NOTRE ACCORD ECRIT

16" – 19/60-16

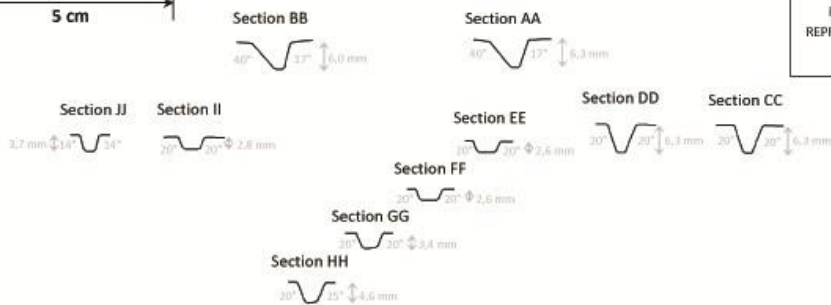


Domaine : Rallye Asphalte
 Dimension : 19 / 60 – 16
 Plan de la sculpture : Pilot Sport R
 Entaillement surfacique sur fenêtre réglementaire : 21,51 %

Clermont-Ferrand le 05/12/2013



Echelle 1:1
 5 cm



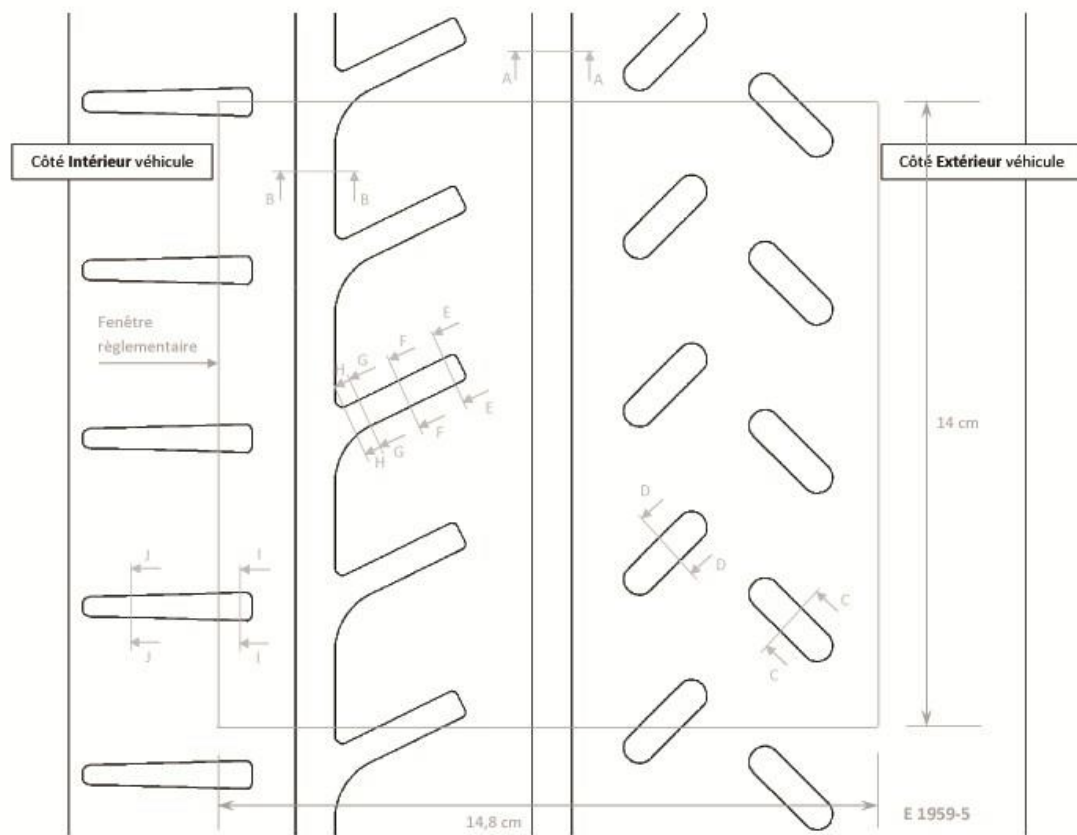
MANUFACTURE FRANCAISE DES PNEUMATIQUES
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 NOTRE ACCORD ECRIT

15" – 19/58-15

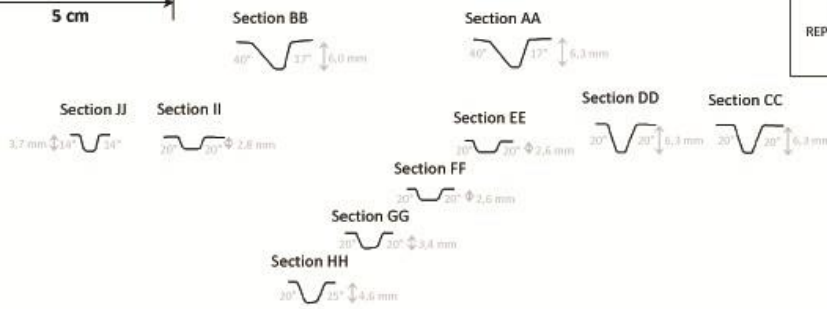


Domaine : Rallye Asphalte
 Dimension : 19 / 58 – 15
 Plan de la sculpture : Pilot Sport R
 Entaillement surfacique sur fenêtre réglementaire : 21,51 %

Clermont-Ferrand le 05/12/2013



Echelle 1:1
 5 cm



MANUFACTURE FRANCAISE DES PNEUMATIQUES
 MICHELIN CLERMONT-FERRAND
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 REPRODUCTION OU UTILISATION INTERDITE SANS
 NOTRE ACCORD ECRIT

RGT only – 24/65-18

Circonférentielles sont manuellement coupées.

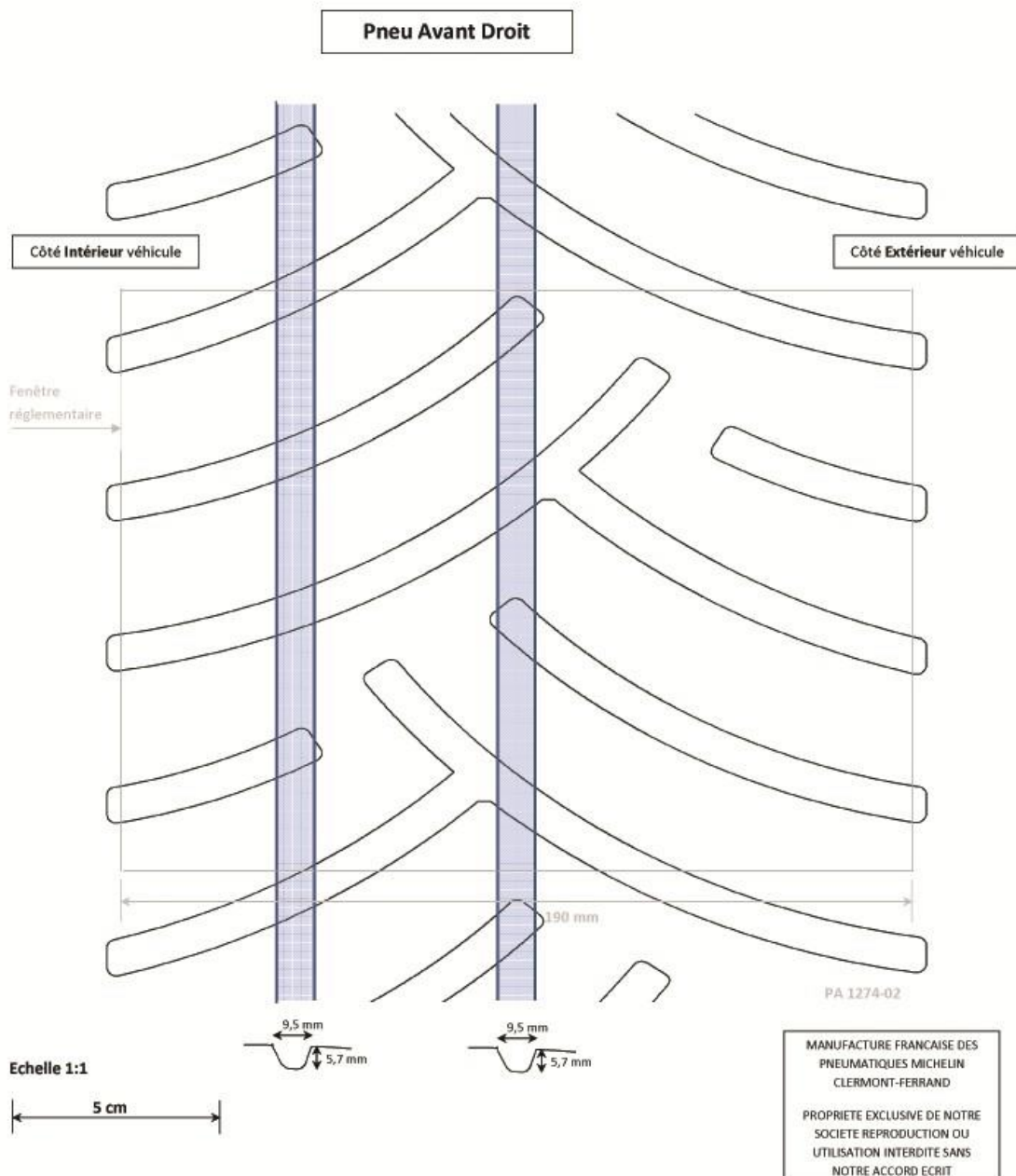


Domaine : Rallye Asphalte

Dimension : 24 / 65 - 18

Entaillement surfacique sur une fenêtre de 190 mm de large : 32,8 %

Clermont-Ferrand le 18/12/2013



RGT only – 24/65-18

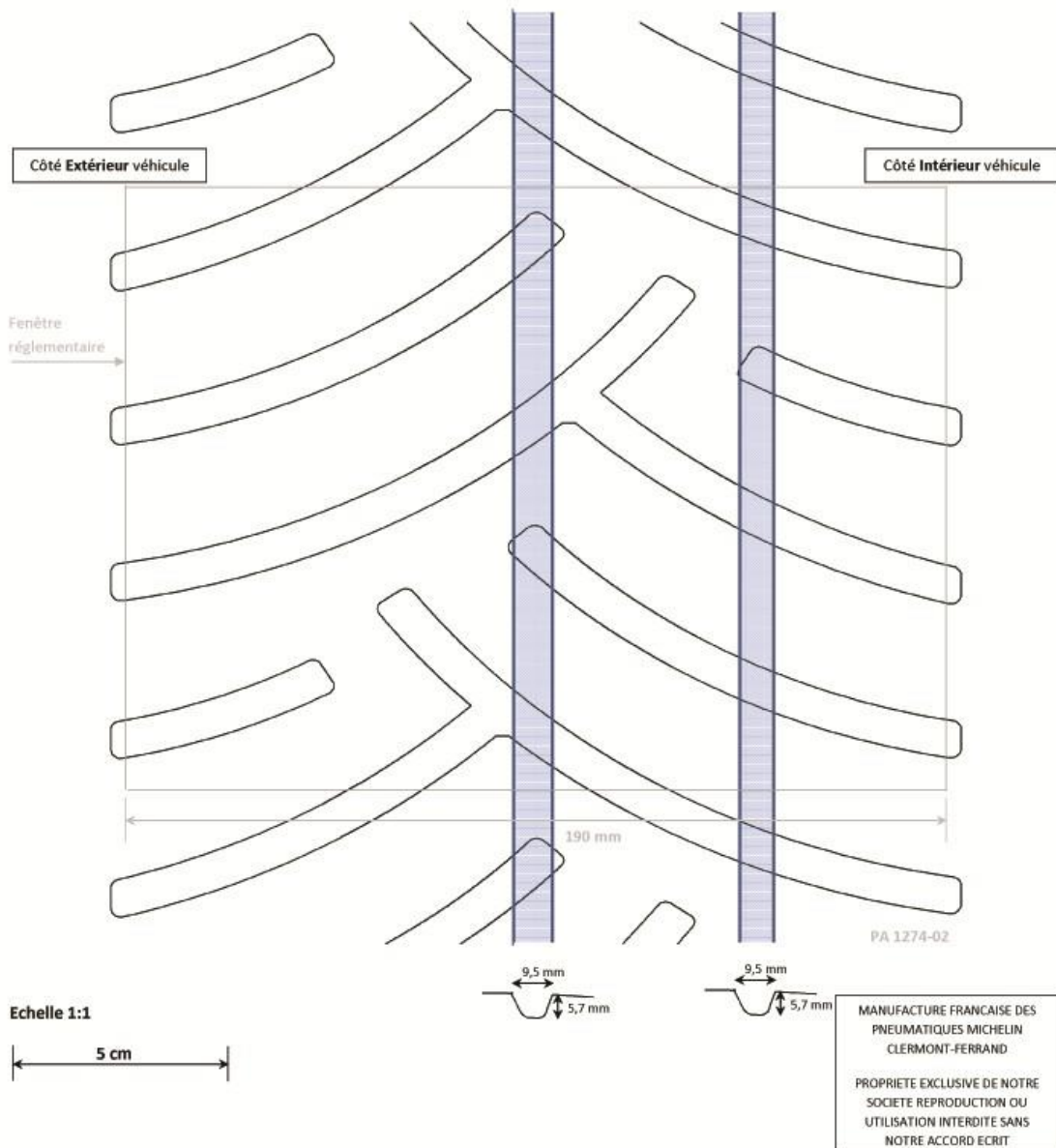
Circonférentielles sont manuellement coupées.



Domaine : Rallye Asphalte
Dimension : 24 / 65 - 18
Entaillement surfacique global : 32,8 %

Clermont-Ferrand le 18/12/2013

Pneu Avant Gauche



RGT only – 24/65-18



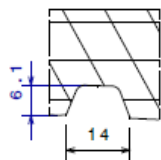
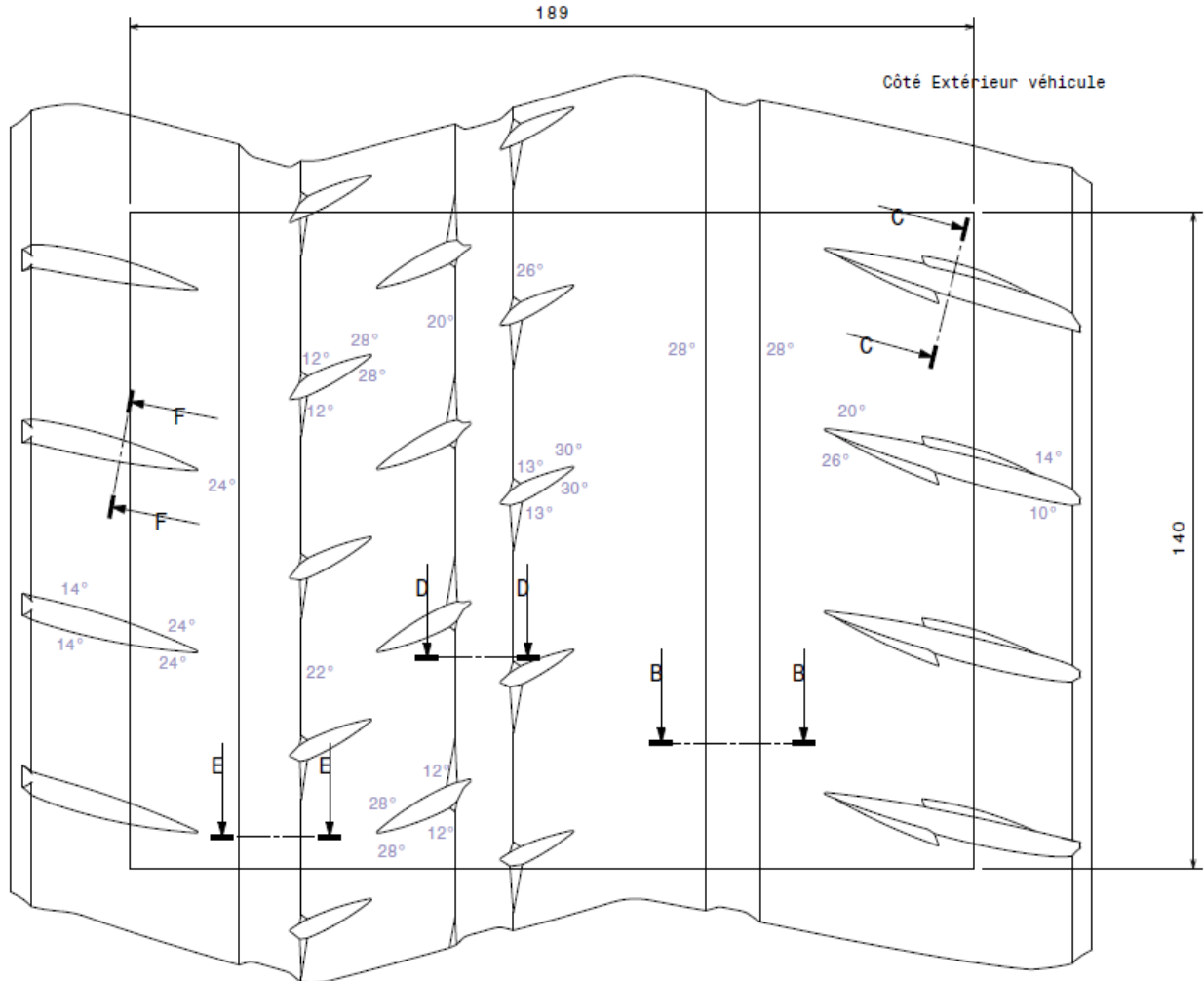
Domaine : Rallye Asphalte

Clermont-Ferrand le 28/02/2018

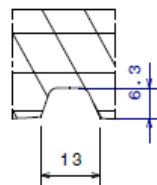
Dimension : 24/65 R18

Plan de la sculpture : Pilot Sport R

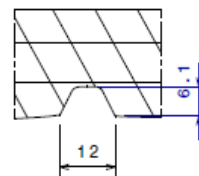
Entaillement Surfaccique dans fenetre règlementaire : 21.7 % à 1.8 mm d'usure
: 17 % à 5.5 mm d'usure



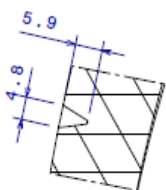
Coupe E-E



Coupe D-D

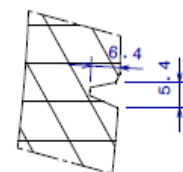


Coupe B-B



Coupe F-F

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MICHELIN CLERMONT-FERRAND
PROPRIETE EXCLUSIVE DE NOTRE SOCIETE
REPRODUCTION OU UTILISATION INTERDITE
SANS NOTRE ACCORD ECRIT

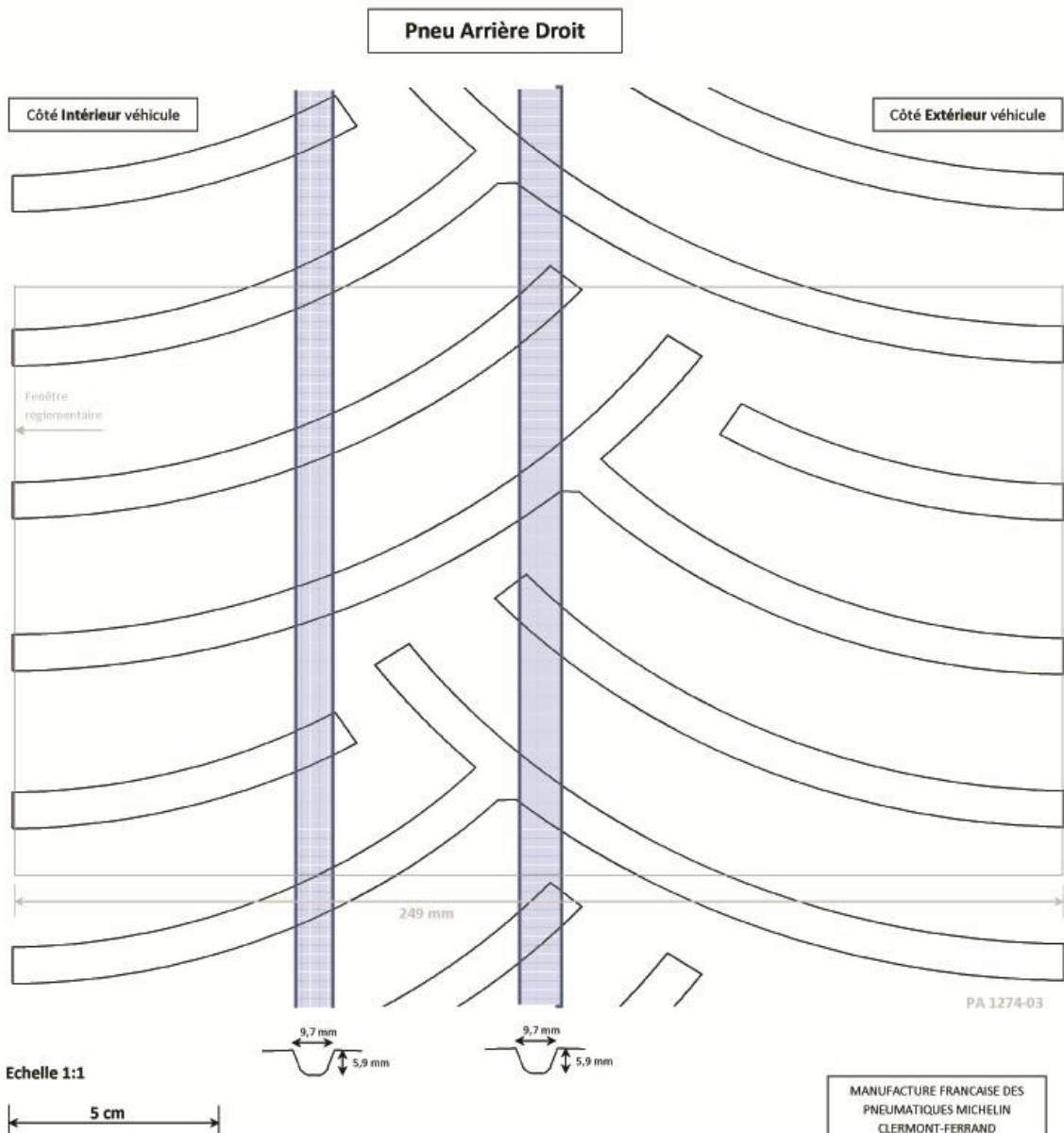


Coupe C-C



Domaine : Rallye Asphalte
Dimension : 29 / 65 - 18
Entaillement surfacique sur fenêtre de 249 mm de large : 31 %

Clermont-Ferrand le 18/12/2013



MANUFACTURE FRANCAISE DES
PNEUMATIQUES MICHELIN
CLERMONT-FERRAND

PROPRIETE EXCLUSIVE DE NOTRE
SOCIETE REPRODUCTION OU
UTILISATION INTERDITE SANS
NOTRE ACCORD ECRIT

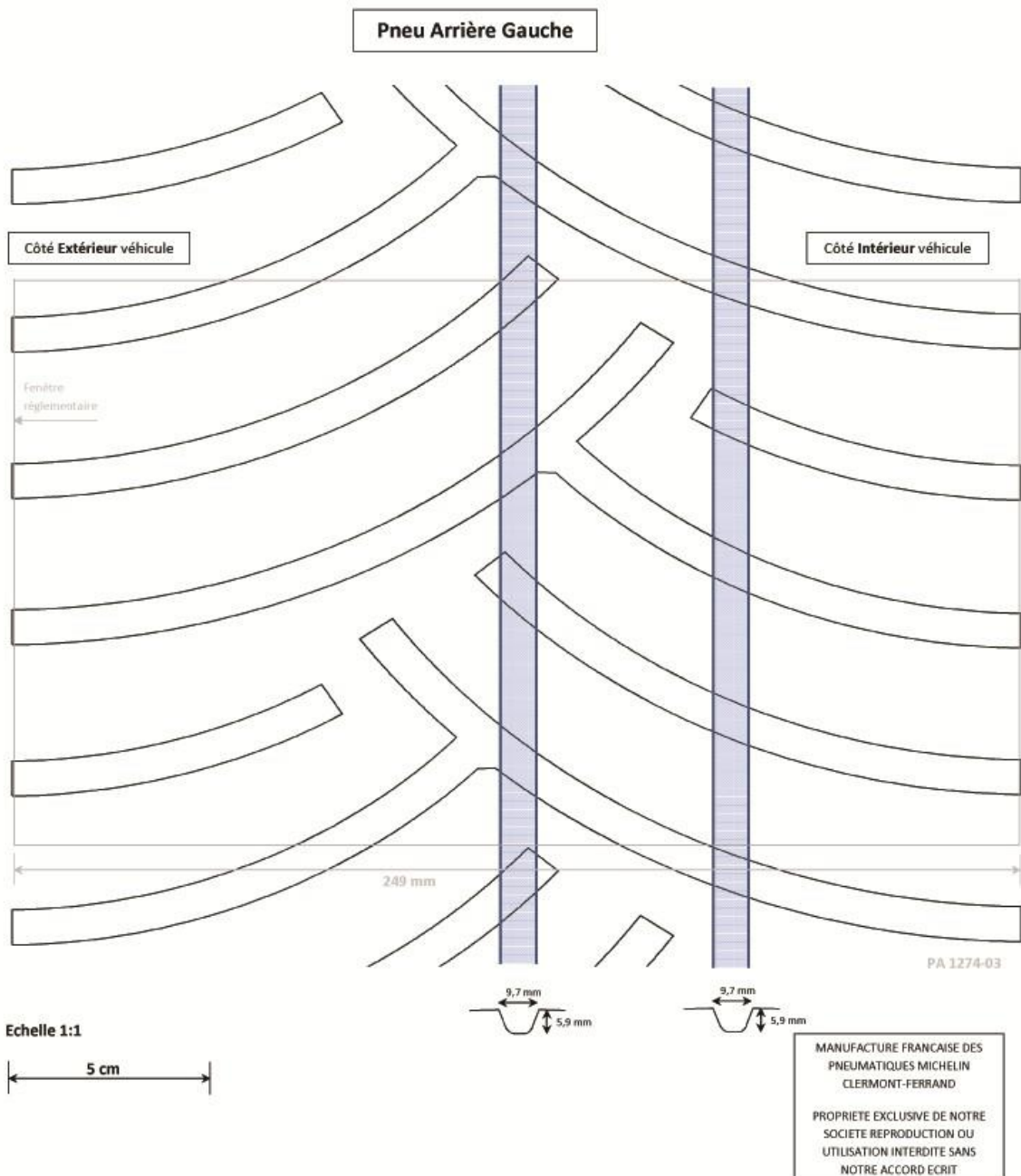
RGT only – 29/65-18

Circonférentielles sont manuellement coupées.



Domaine : Rallye Asphalte
Dimension : 29 / 65 – 18
Entaillement surfacique sur fenêtre de 249 mm de large : 31 %

Clermont-Ferrand le 18/12/2013

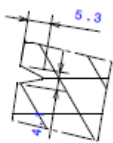
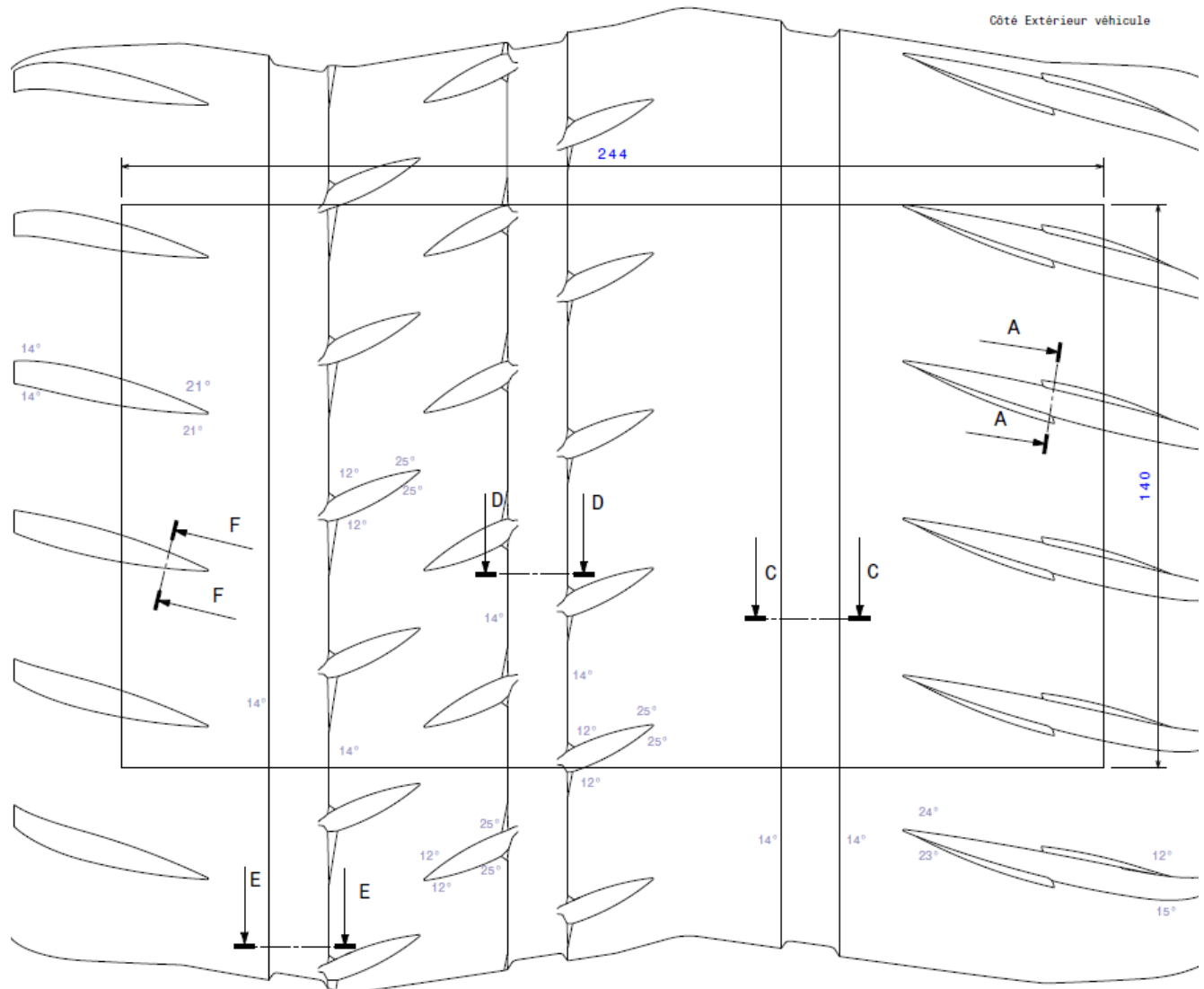


RGT only – 29/65-18

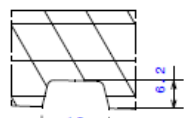


Domaine : Rallye Asphalte
 Dimension : 29/65 R18
 Plan de la sculpture : Pilot Sport R
 Entaillement Superficiel dans fenêtre réglementaire : 22.6 % à 1.8 mm d'usure
 : 19.2 % à 5.5 mm d'usure

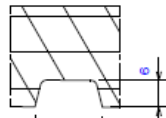
Clermont-Ferrand le 28/02/2018



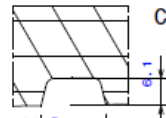
Coupe F-F



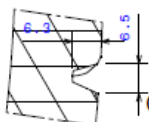
Coupe E-E



Coupe D-D



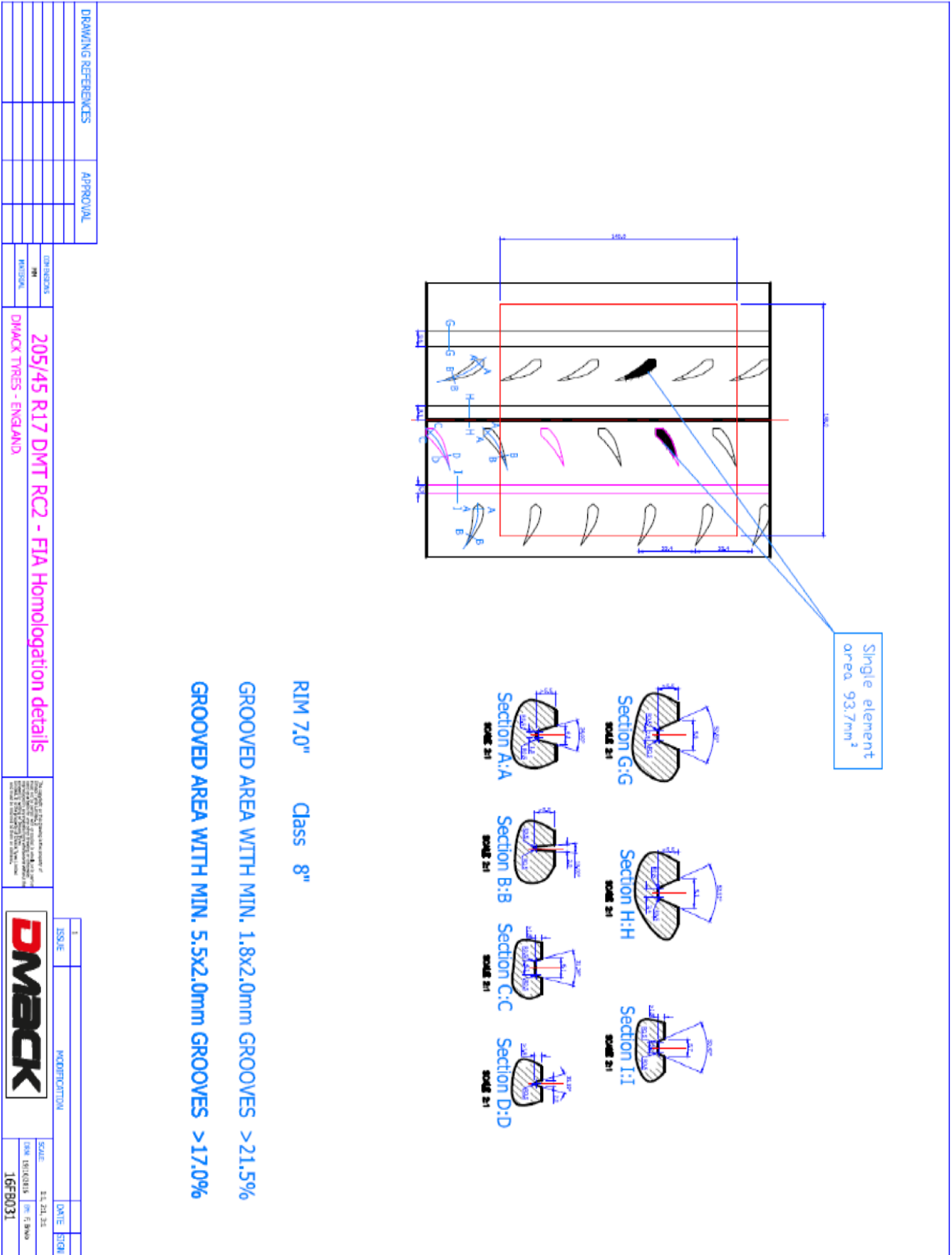
Coupe C-C



Coupe A-A

MANUFACTURE FRANCAISE DES PNEUMATIQUES MICHELIN
 CLERMONT-FERRAND
 PROPRIETE EXCLUSIVE DE NOTRE SOCIETE
 REPRODUCTION OU UTILISATION INTERDITE SANS
 NOTRE ACCORD ECRIT

17" – 205/45-17



DRAWING REFERENCES		APPROVAL	

DIMENSIONS		DESCRIPTION	
MM	INCH		
205/45 R17 DMT RC2		205/45 R17 DMT RC2 - FIA Homologation details	
DMACK TYRES - ENGLAND			

DMACK Tyres is a registered trademark of DMACK Tyres Ltd. All rights reserved. DMACK Tyres is a registered trademark of DMACK Tyres Ltd. All rights reserved.

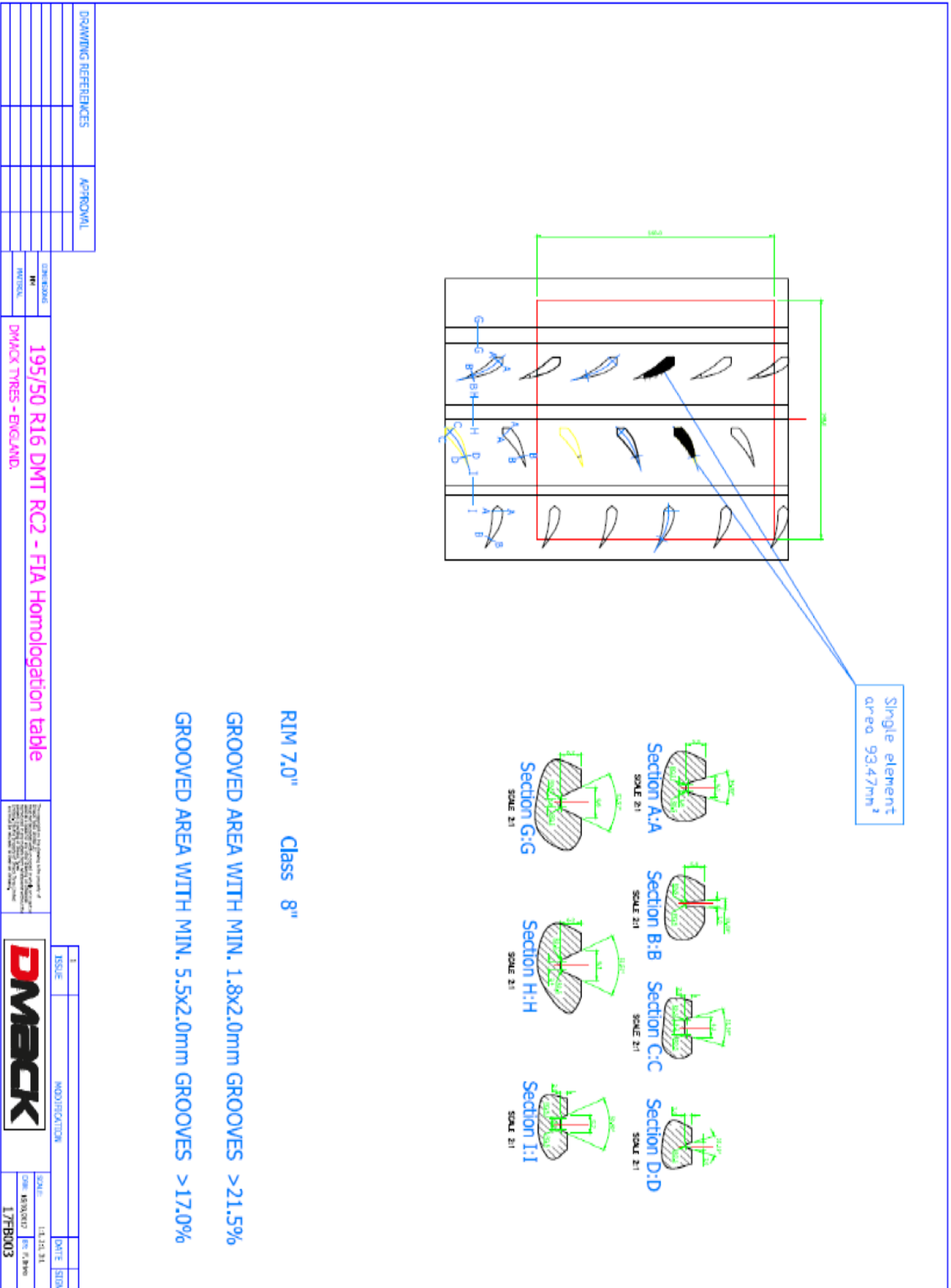
ISSUE	MODIFICATION	DATE	SIGN
1		21.01.24	

SCALE: 1:1

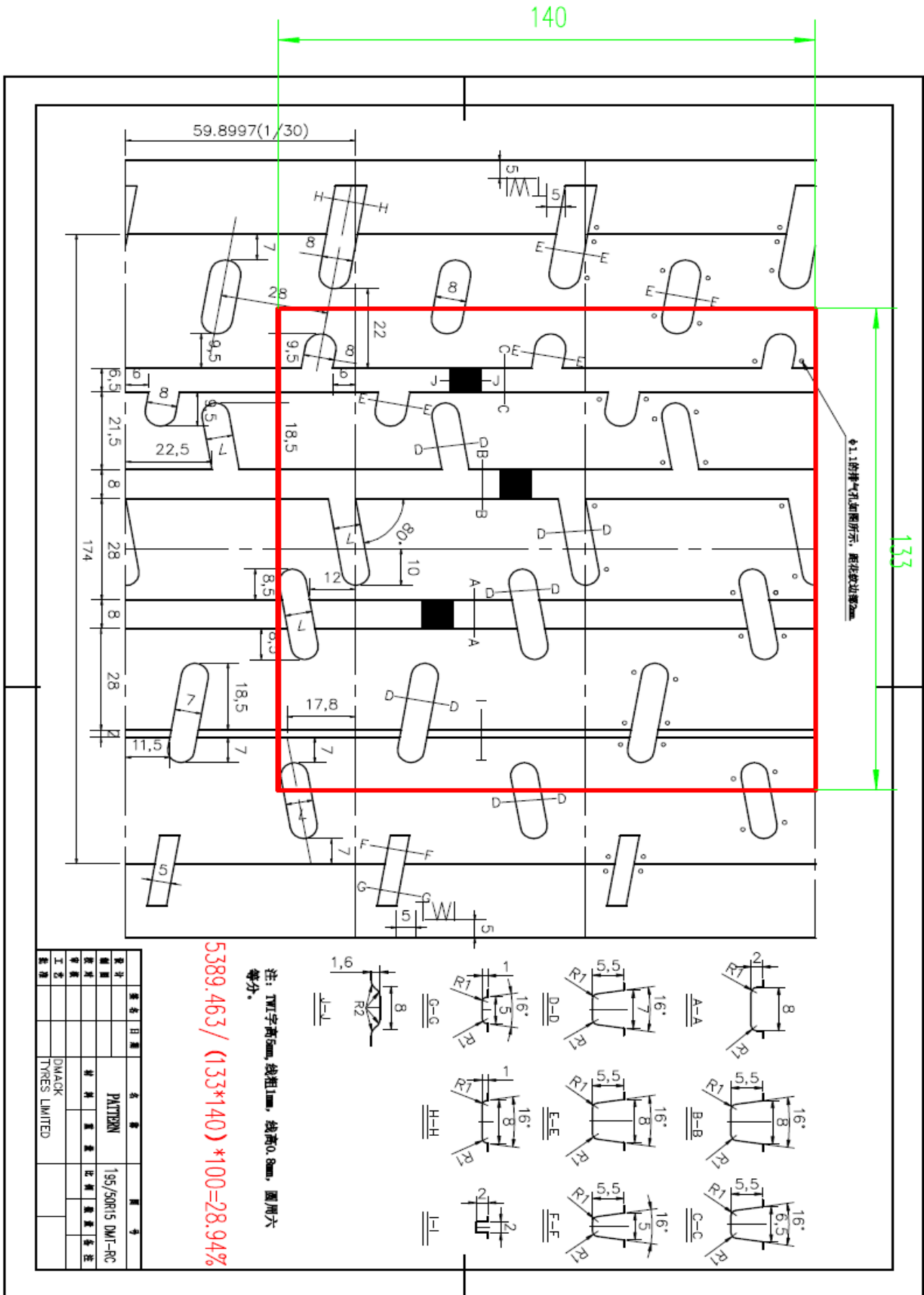
DMACK

16FB031

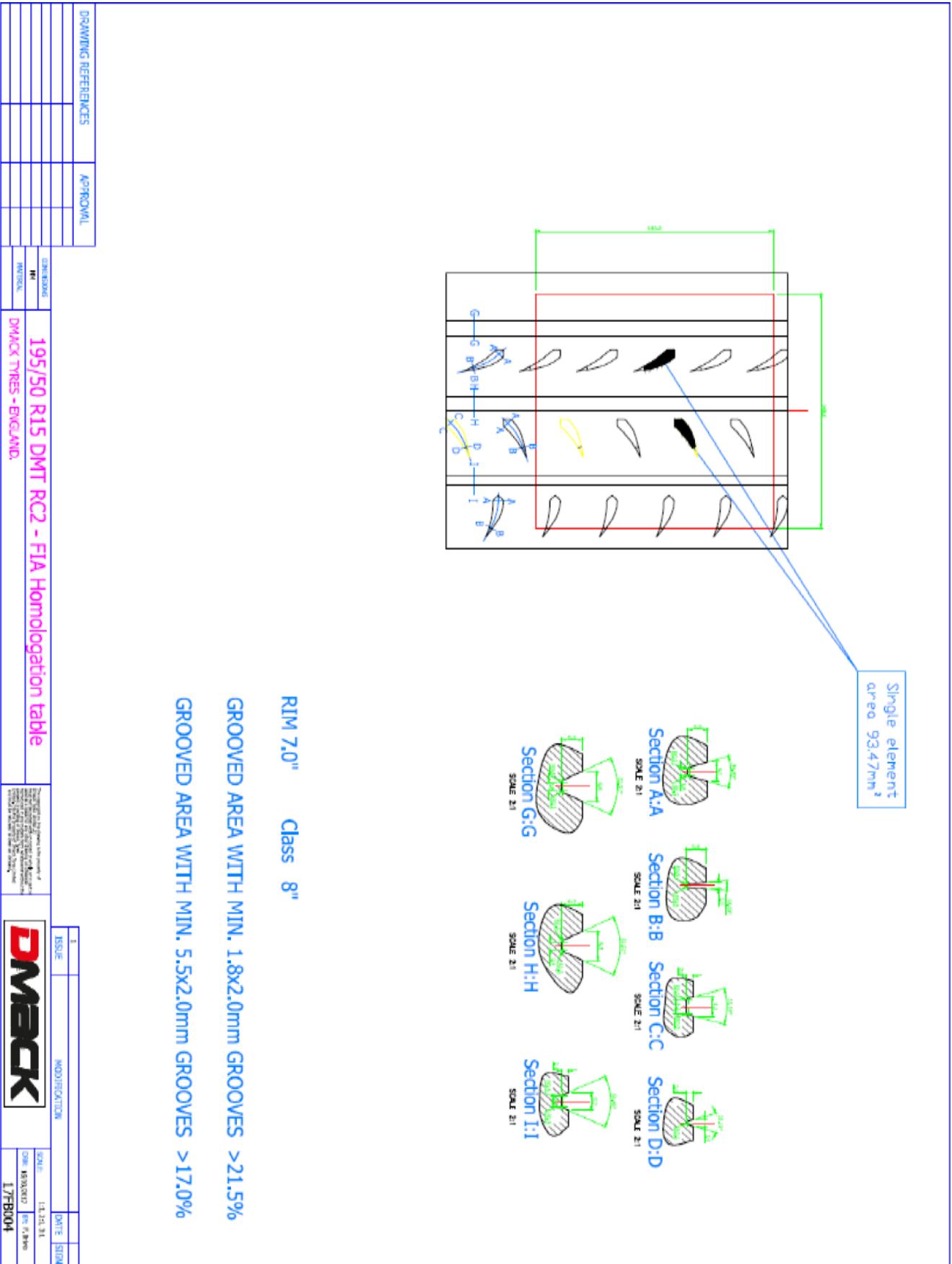
16" – 195/50-16



15" – 195/50-15

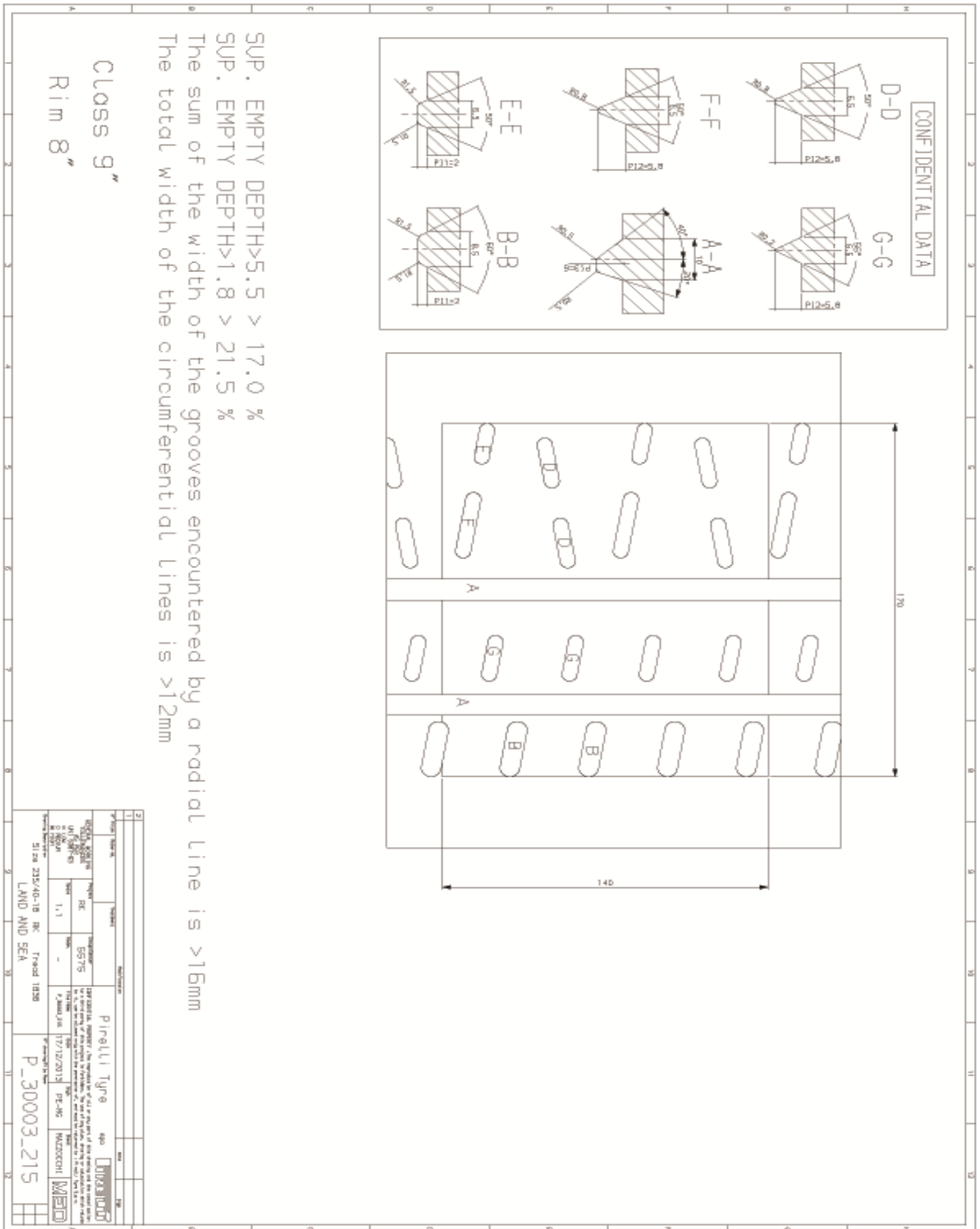


15" – 195/50-15





18" – 235/40-18

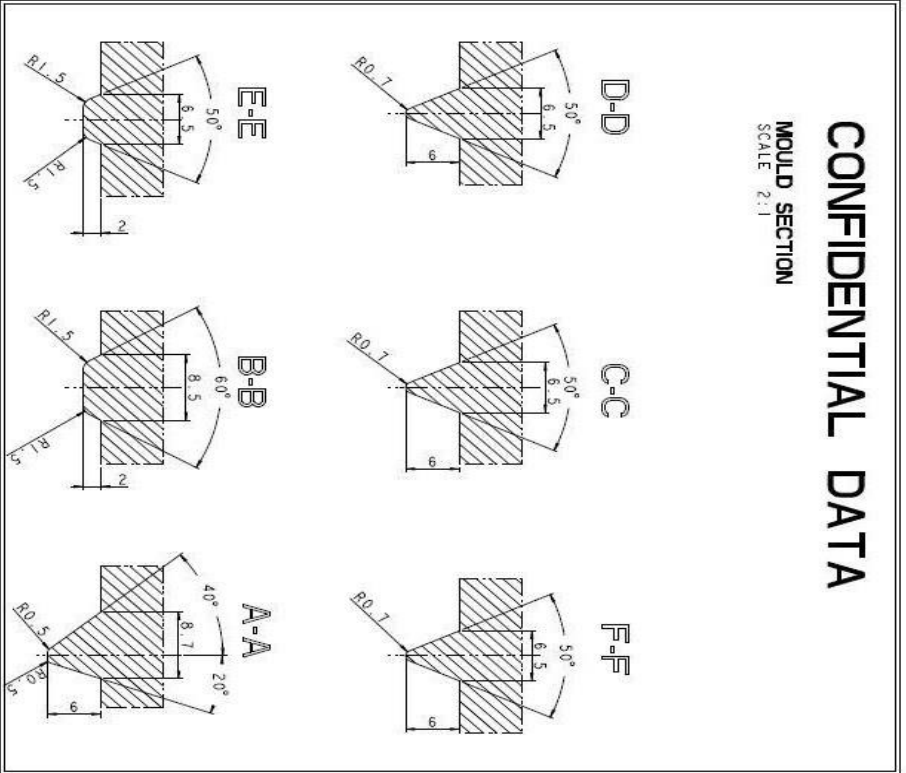




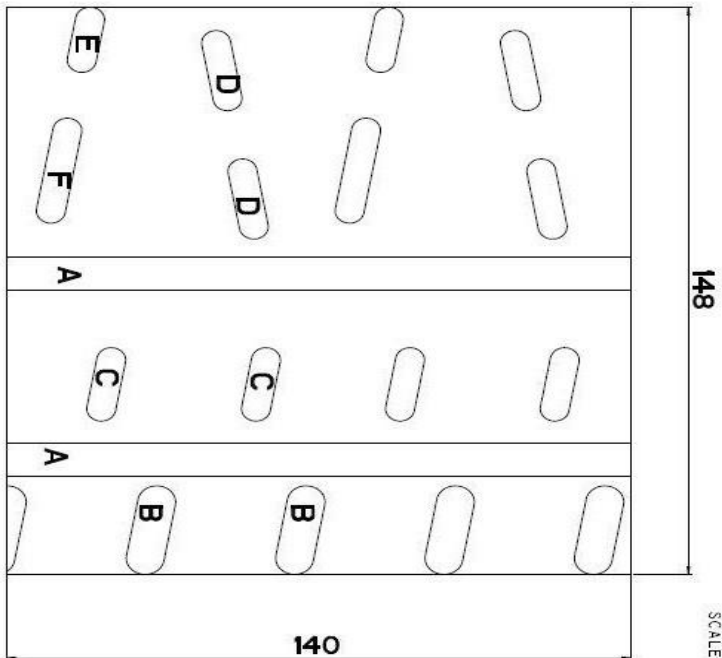
15" – 195/50-15

CONFIDENTIAL DATA

MOULD SECTION
SCALE 2:1



SUP. EMPTY DEPTH >5.5 $>17\%$
 SUP. EMPTY DEPTH >1.8 $>21.5\%$
 The sum of the width of the grooves encountered by a radial line is $>16mm$
 The total width of circumferential lines is $>12mm$



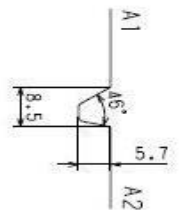
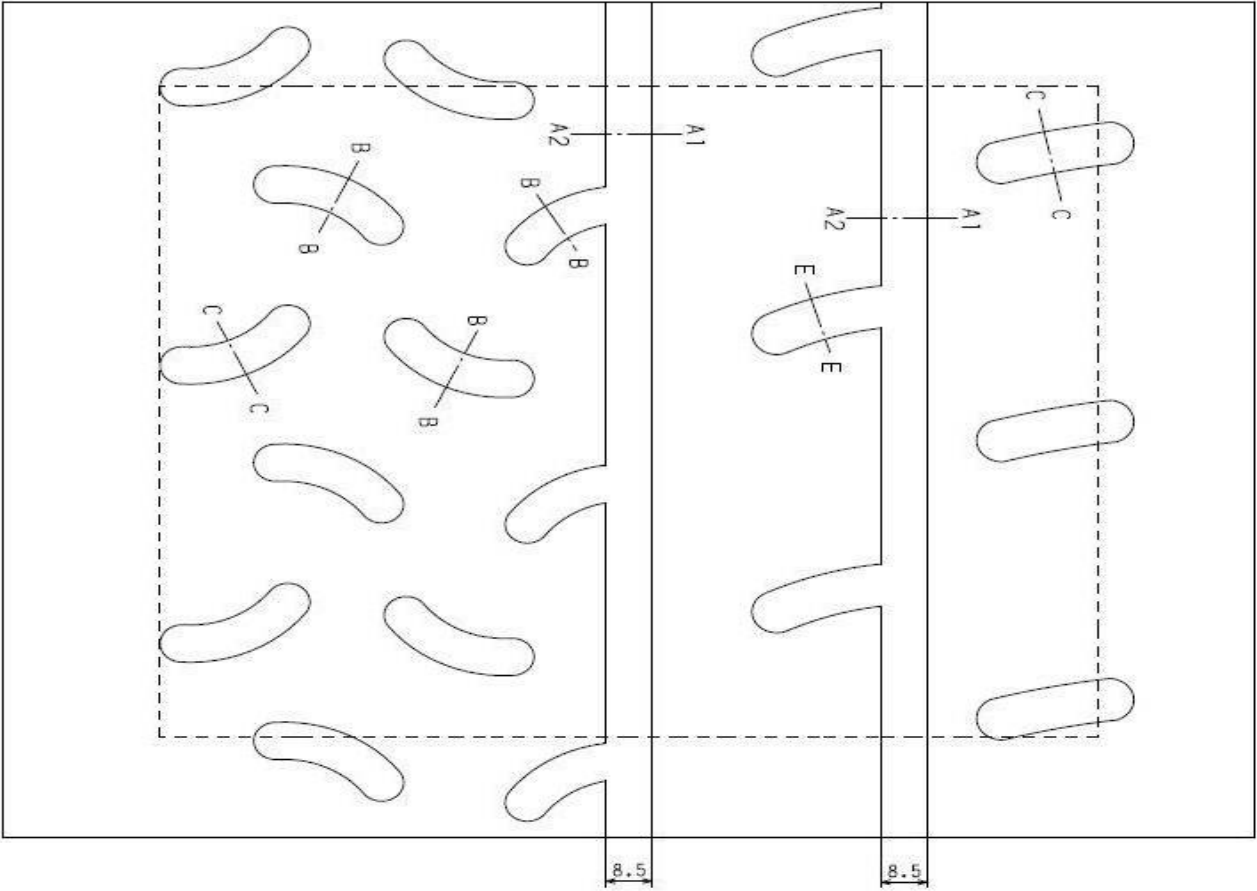
**CLASS 8"
RIM 7"**

N°	ITEM	MATERIAL	TREATMENT	MODIFICATION	DATE	SIGN
1						
2						
3						
4						

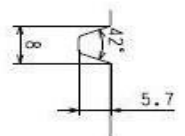
DESIGNER	Project	CONTRACTOR	Pirelli Tyre spa
SCALE	1:1	DATE	19/03/2014
BY	PE - MC	EXT	MAZZOCCHI
CHECKED	PRO/E		

Size 195/50-15 RK Tread 1838A
 LAND & SEA **P_30004_290**

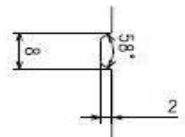
18" – 235/40-18



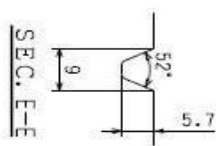
SEC. A1-A2



SEC. B-B



SEC. C-C



SEC. E-E

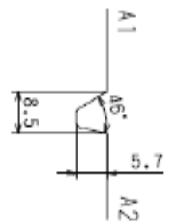
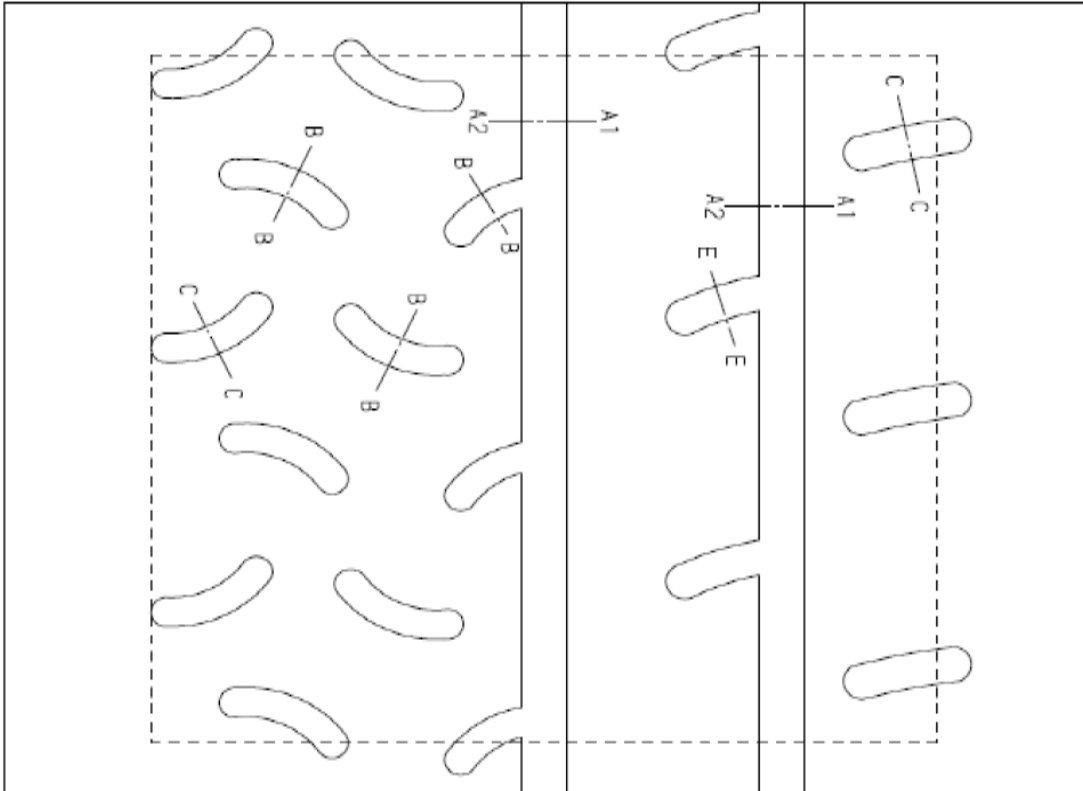
In the control area
 5.5mm grooves-18.1%
 Total grooves-22.2%

----- Control area 170X140
 Tyre weight 9.7kg

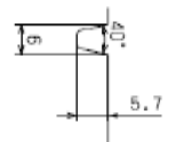
PRODUCT NAME
YOKOHAMA ADVAN AD51T

PATTERN NAME
AD51A

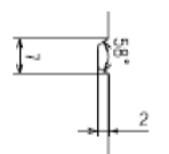
SIZE 210/650R18



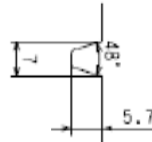
SEC. A1-A2



SEC. B-B



SEC. C-C



SEC. E-E

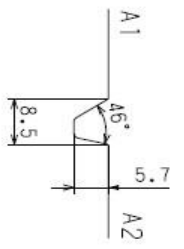
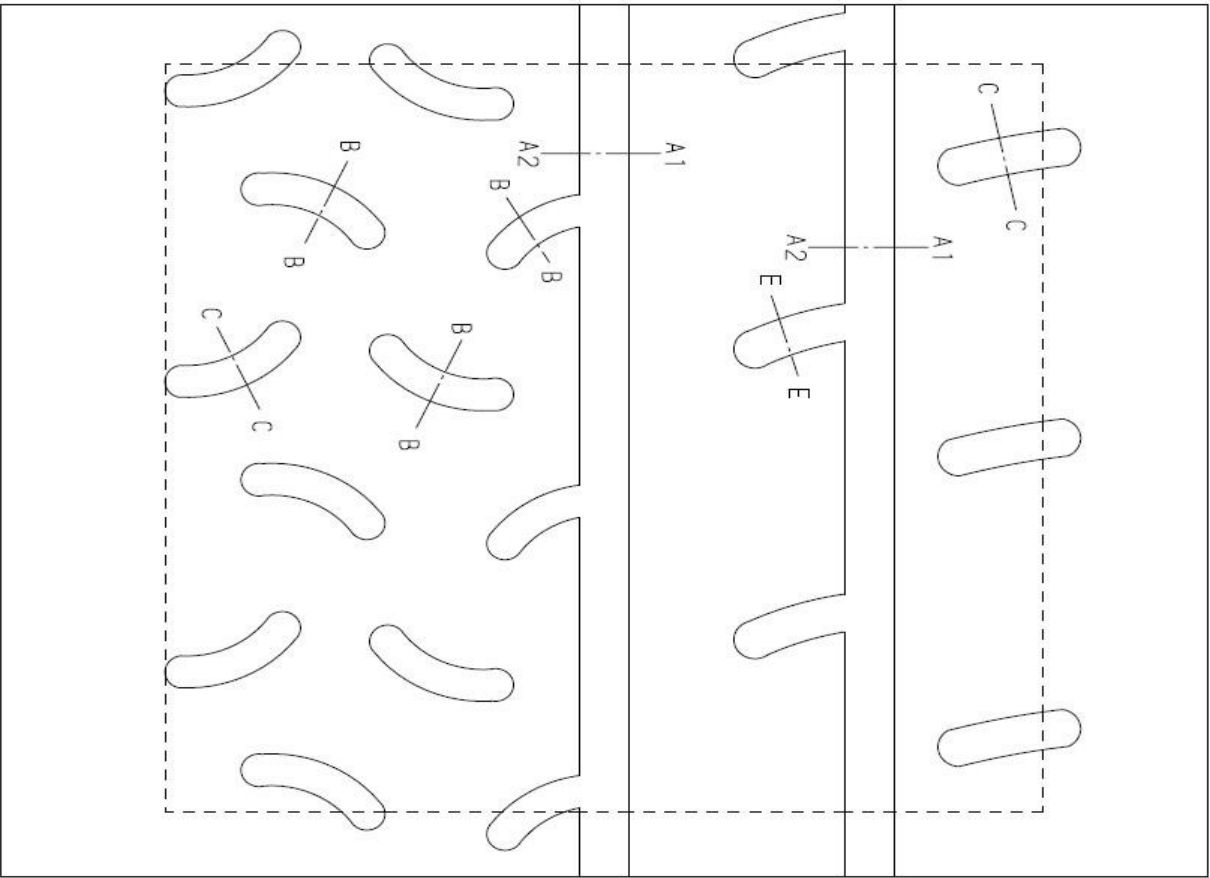
In the control area
 5.5mm grooves-17.9%
 Total grooves-21.6%

----- Control area 170X140

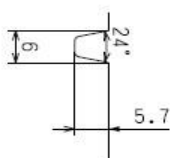
PRODUCT NAME
YOKOHAMA ADVAN AD51T

PATTERN NAME
AD51A

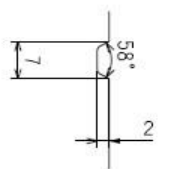
SIZE 210/625R17



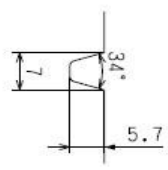
SEC. A1-A2



SEC. B-B



SEC. C-C



SEC. E-E

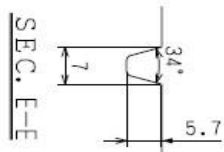
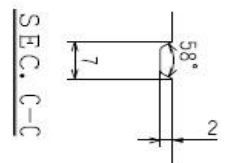
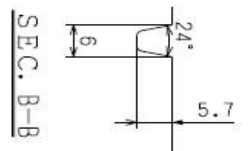
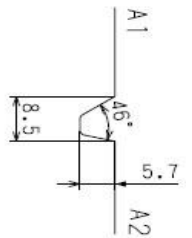
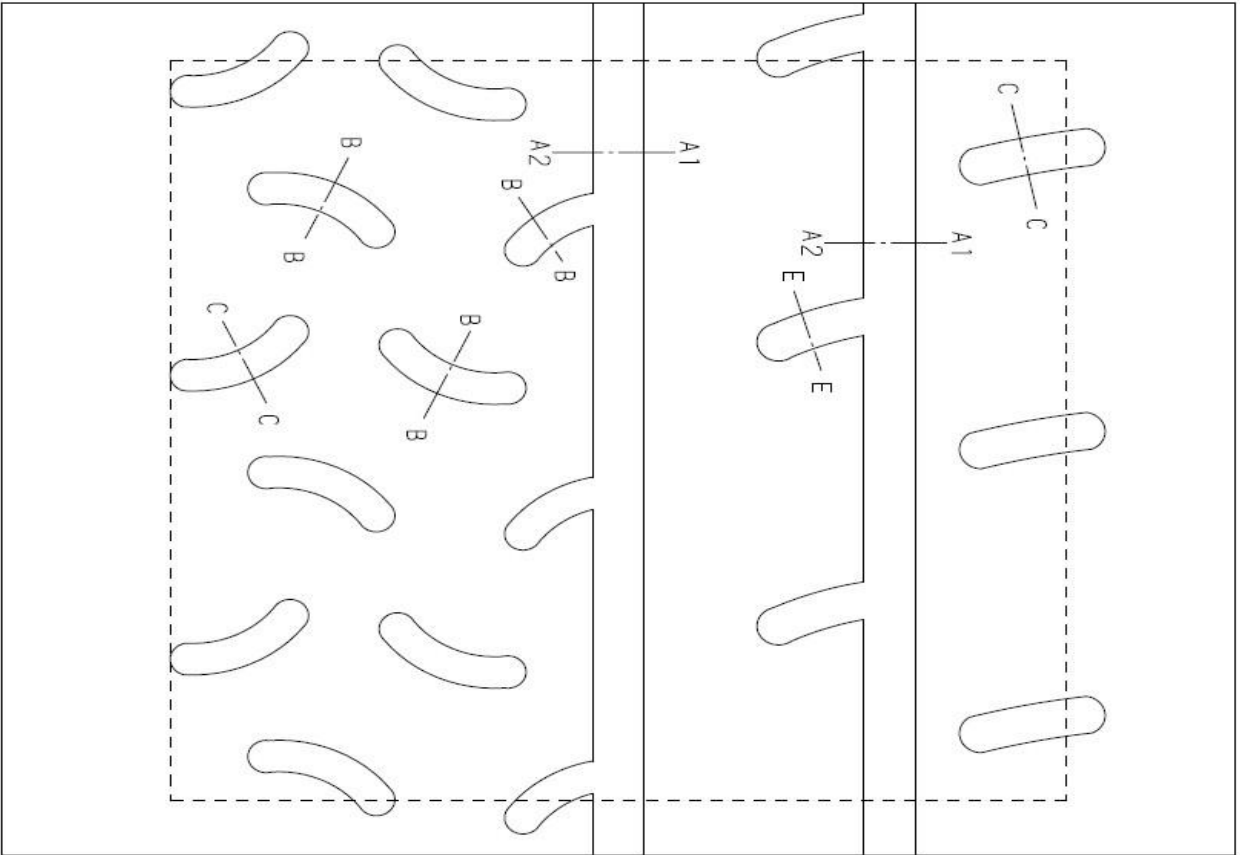
In the control area
 5.5mm grooves - 18.2%
 Total grooves - 22.0%

----- Control area 148X140

PRODUCT NAME
YOKOHAMA ADVAN A051T

PATTERN NAME
A051A

SIZE 190/625R17



In the control area
 5.5mm grooves-18.1%
 Total grooves-21.9%

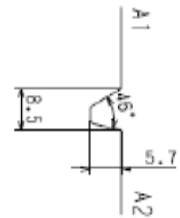
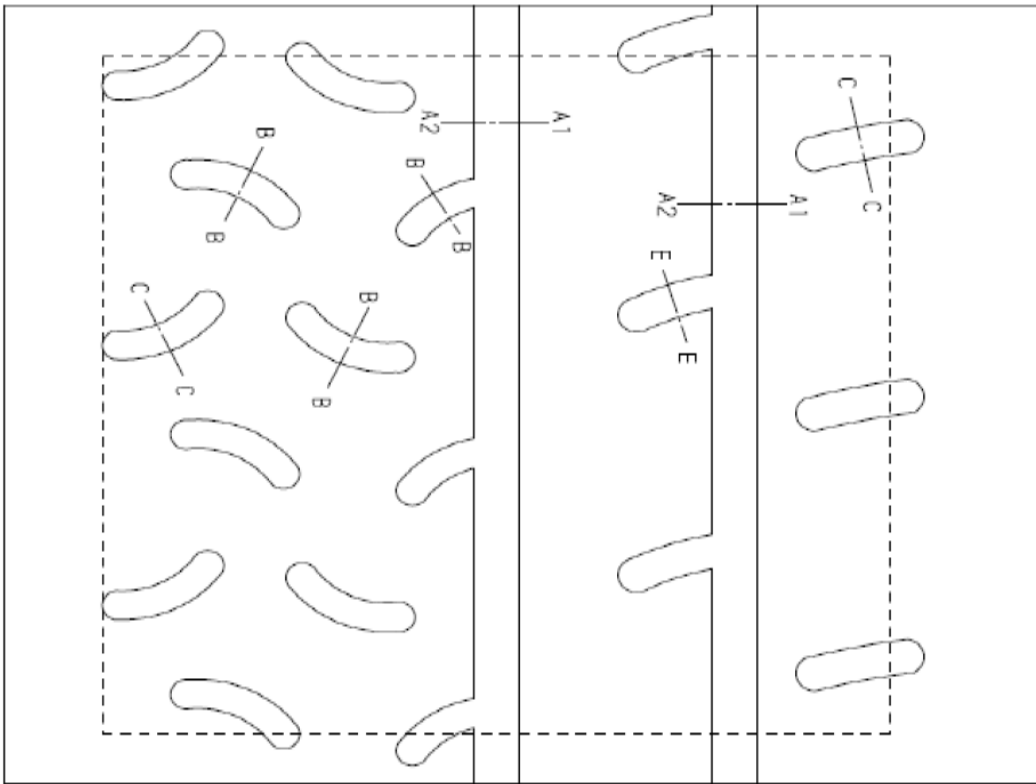
----- Control area 148X140

PRODUCT NAME
YOKOHAMA ADVAN AD51T

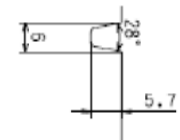
PATTERN NAME
AD51A

SIZE 190/600R16

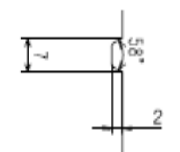
15" – 190/580-15



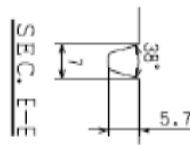
SEC. A1-A2



SEC. B-B



SEC. C-C



SEC. E-E

In the control area
 5.5mm grooves-18.2%
 Total grooves-21.6%

----- Control area 148X140

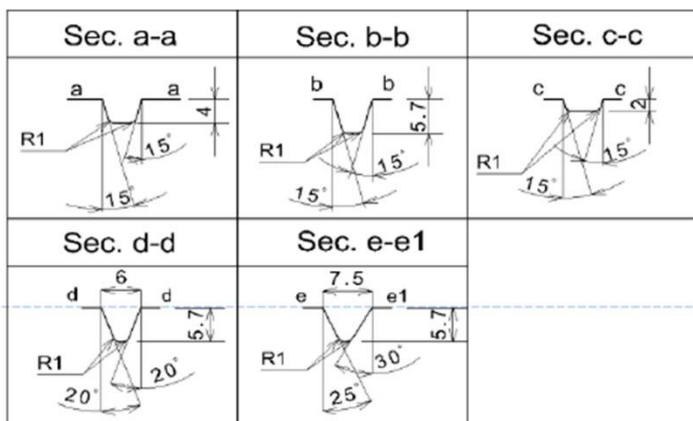
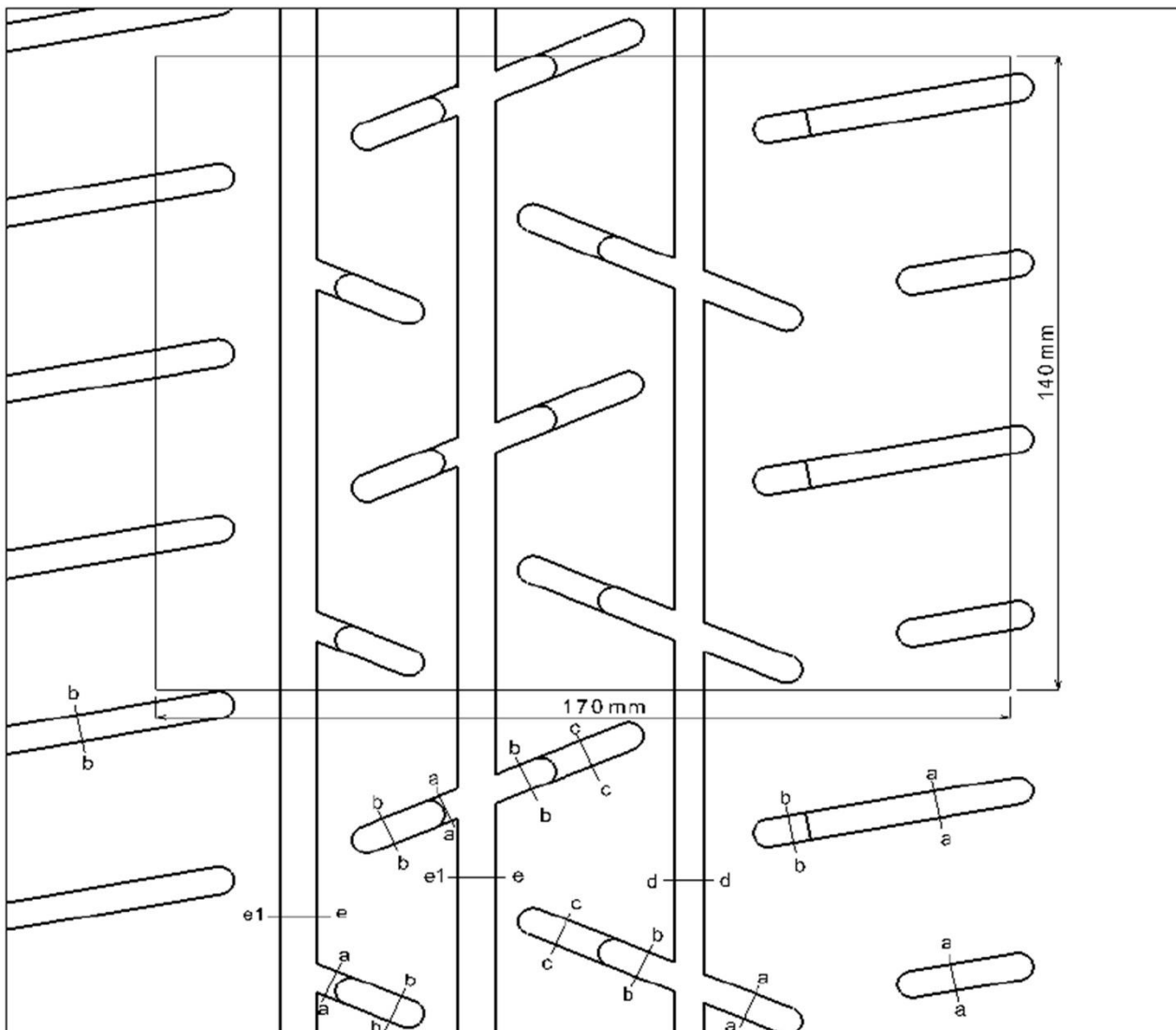
PRODUCT NAME
YOKOHAMA ADVAN AD517

PATTERN NAME
AD51A

SIZE 190/580R15

18" - 210/650R18

Product:Ventus Z205



Class 9" (Rim 8")

Empty Depth > 5.5mm : 17.07%

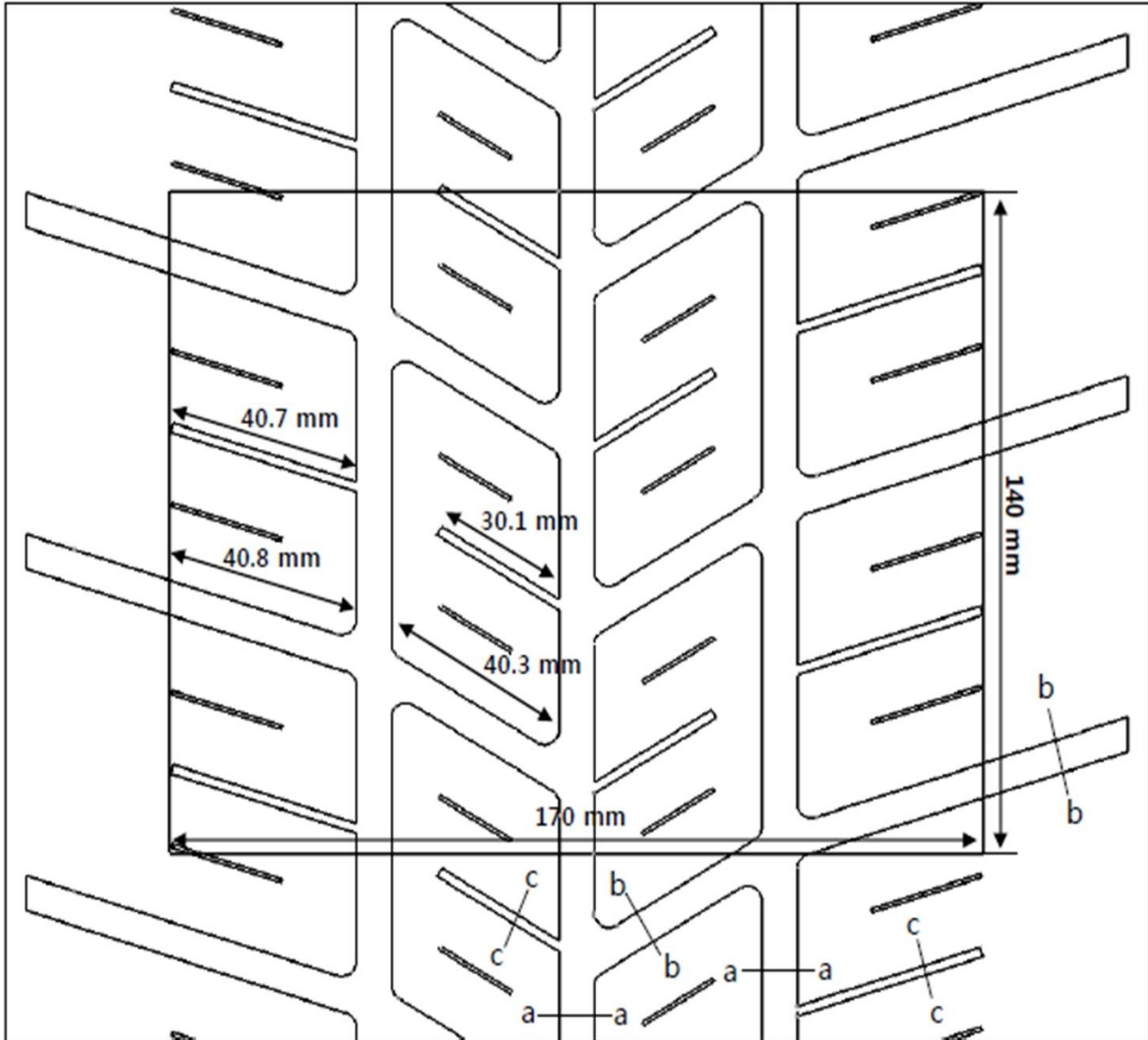
Empty Depth > 1.8mm : 23.30%

GROOVE SURFACE AREA = 554540 mm²

Control Surface = 23800 mm²

18" - 210/650R18

Product:VentusZ210



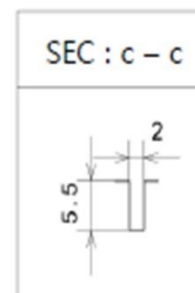
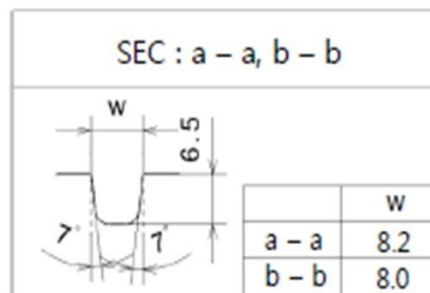
Class 9" (Rim 8")

a - a groove width / depth : 8.2 mm / 6.5 mm

b - b groove width / depth : 8.0 mm / 6.5 mm

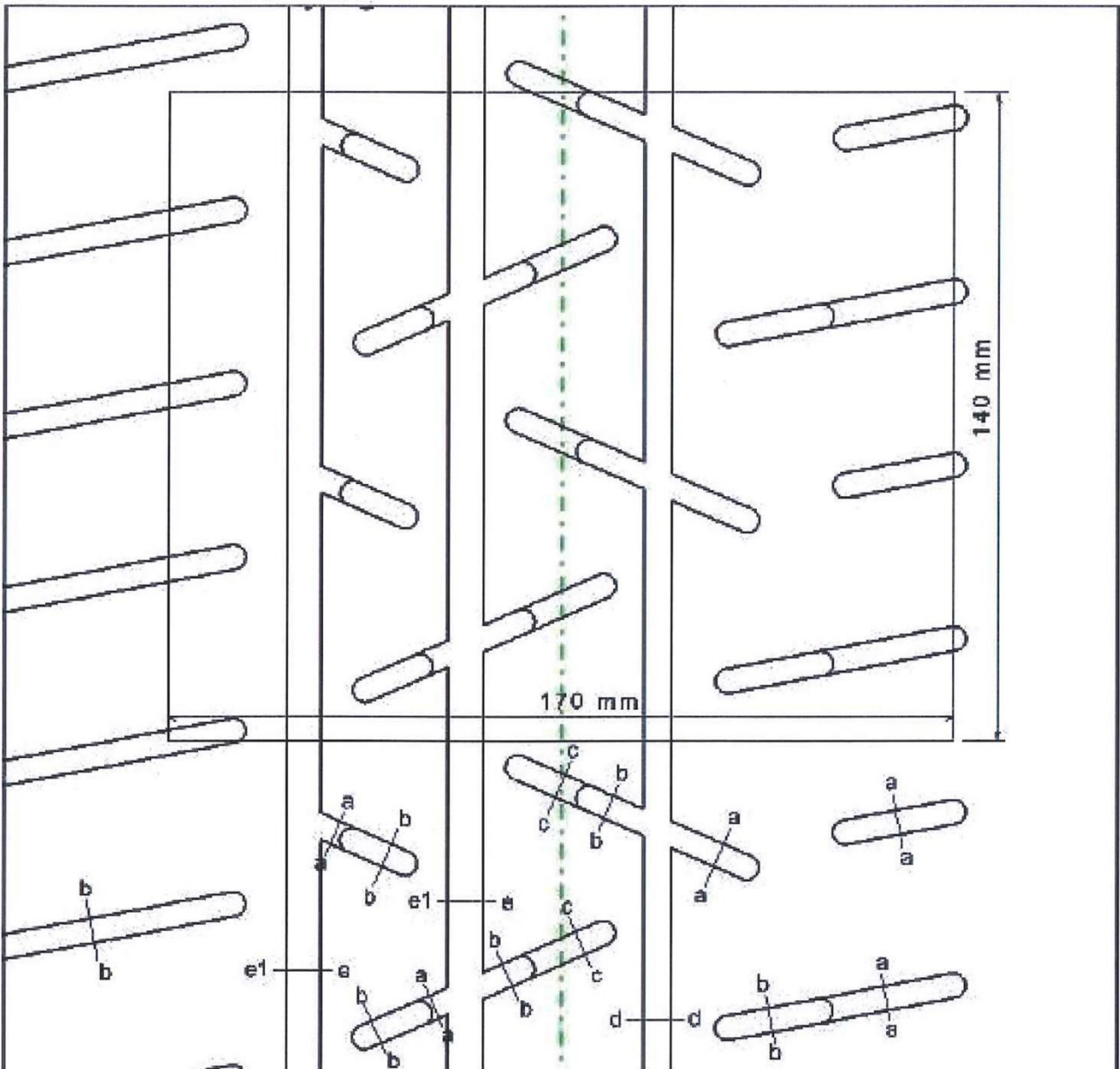
Empty Depth > 5.5mm : 27.5%

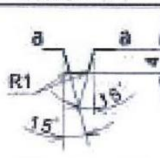
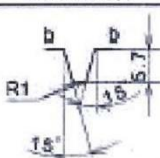
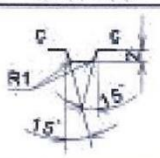
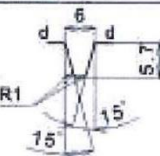
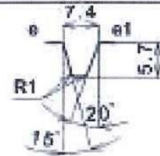
Control Surface = 23800 mm²



17" - 210/625 R17

Product :Ventus Z205



Sec. a-a	Sec. b-b	Sec. c-c
		
Sec. d-d	Sec. e-e1	
		

Class 9" (Rim 7.5")

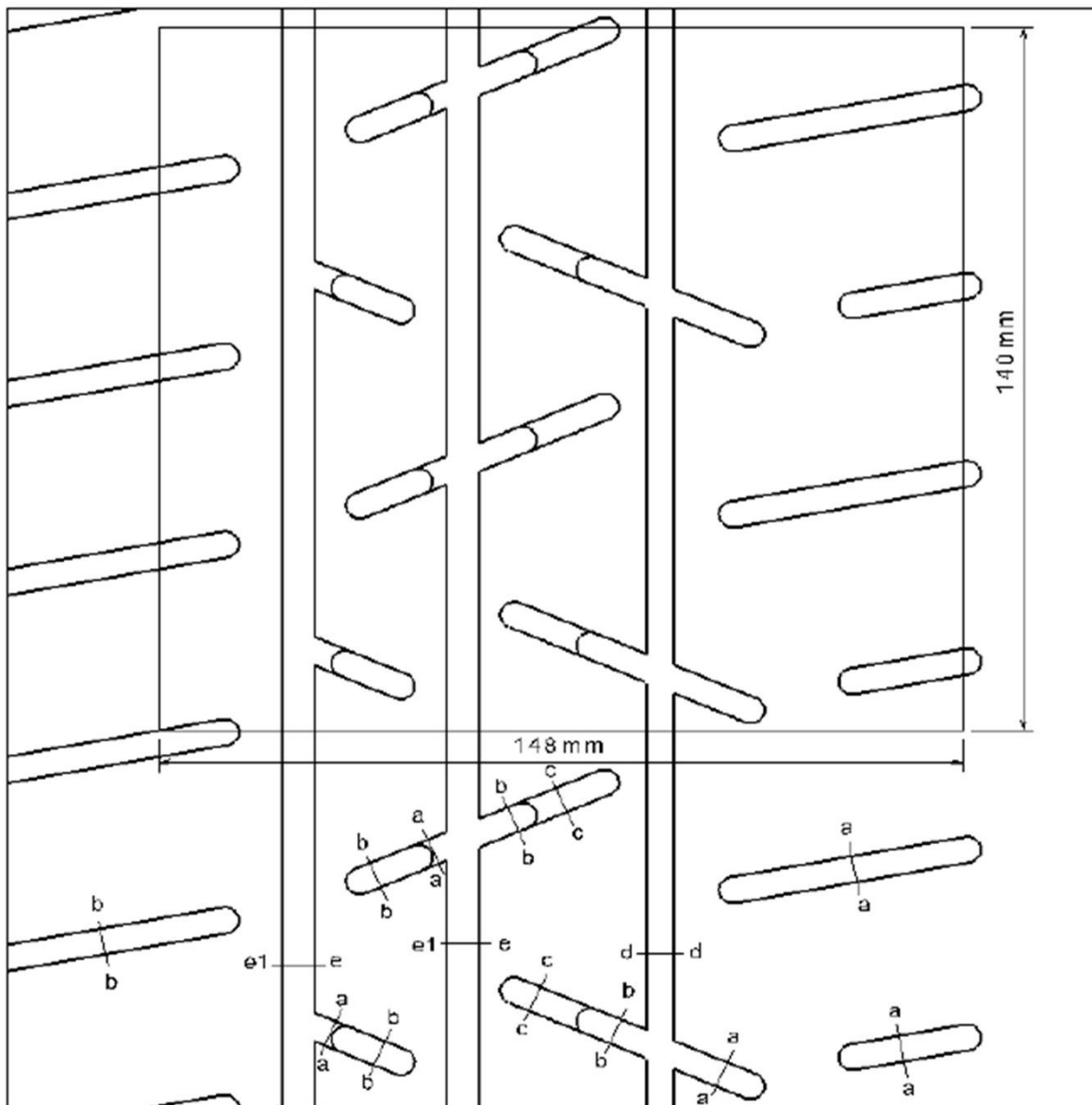
Empty Depth > 5.5mm : 17.05%

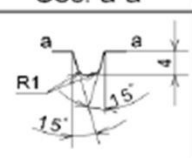
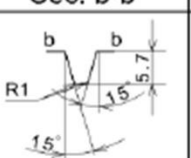
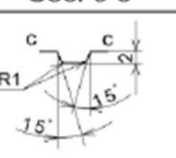
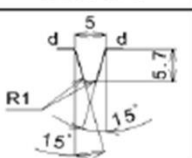
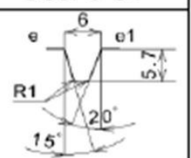
Empty Depth > 1.8mm : 25.08%

Control Surface = 23800 mm²

17" - 180/625 R17

Product :Ventus Z205



Sec. a-a	Sec. b-b	Sec. c-c
		
Sec. d-d	Sec. e-e1	
		

Class 8" (Rim 7")

Empty Depth > 5.5mm : 17.06%

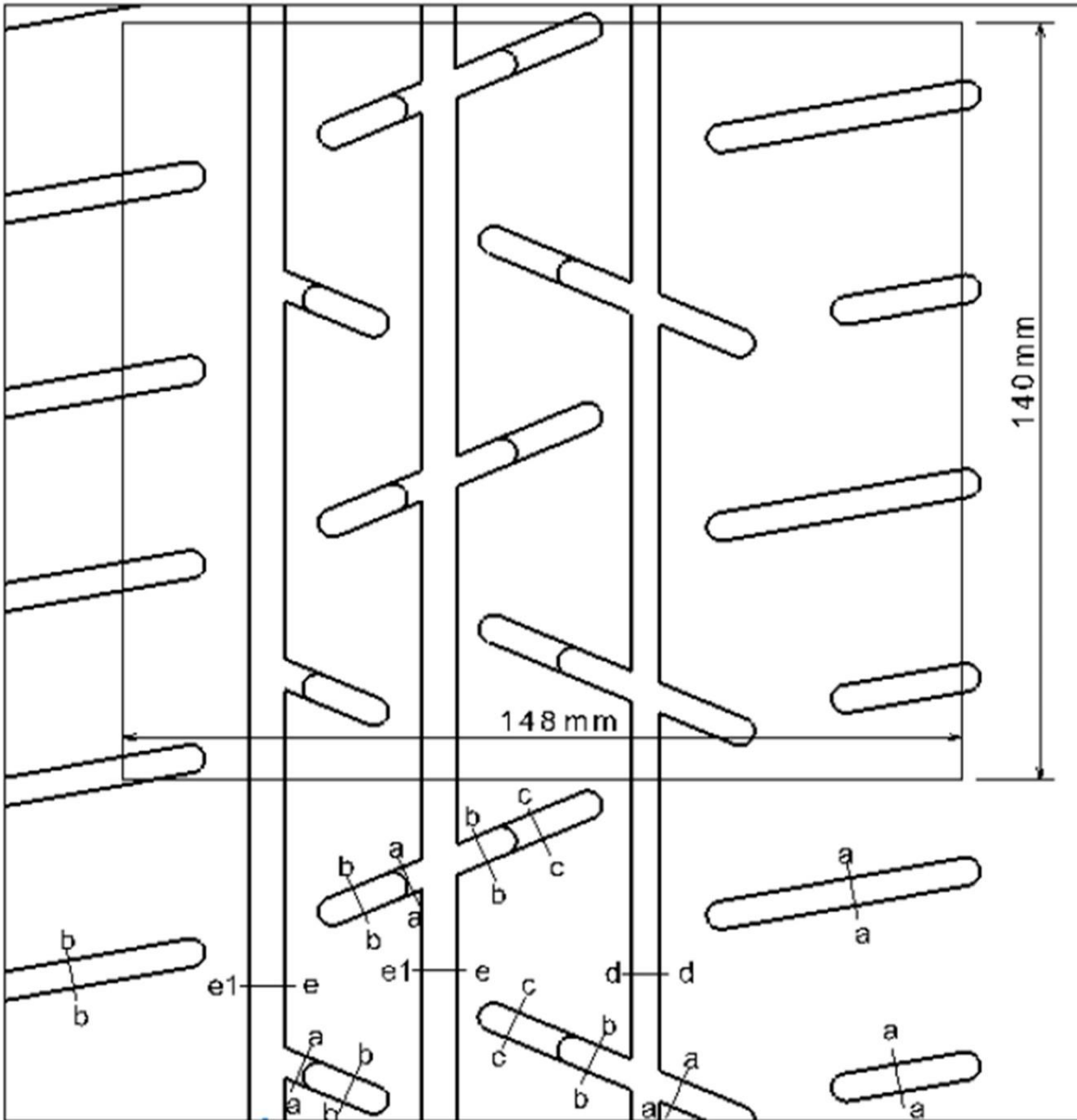
Empty Depth > 1.8mm : 22.48%

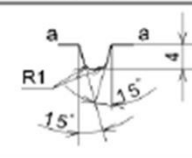
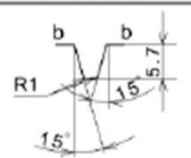
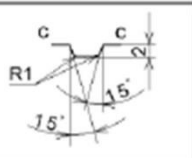
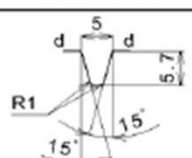
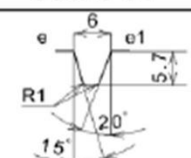
8

GROOVE SURFACE AREA = 353483.2 mm²

Control Surface = 20720 mm²

16" - 180/600R16



Sec. a-a	Sec. b-b	Sec. c-c
		
Sec. d-d	Sec. e-e1	
		

Class 8" (Rim 6.5")

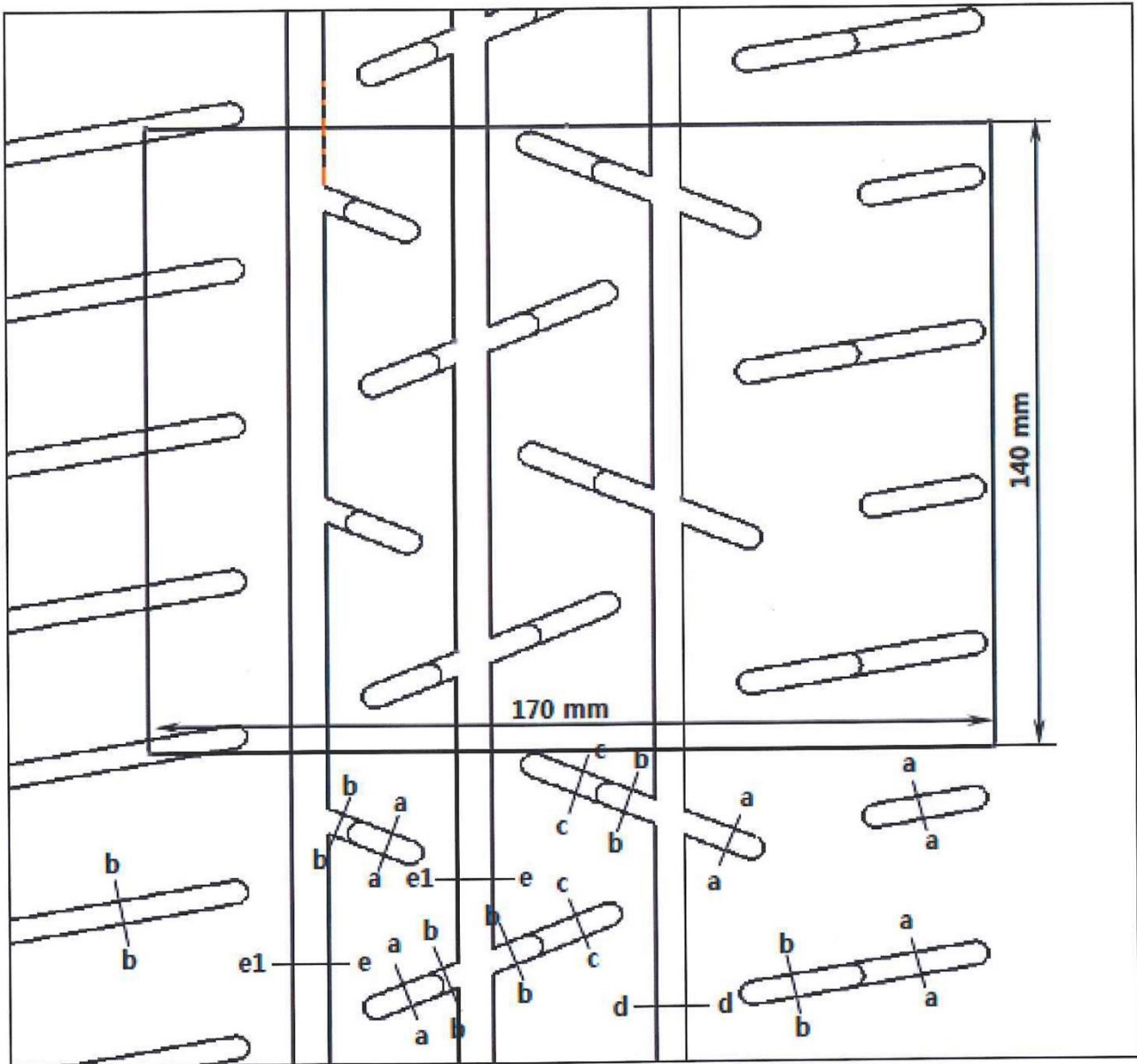
Empty Depth > 5.5mm : 17.30%

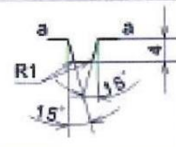
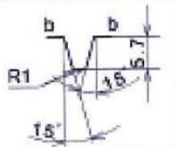
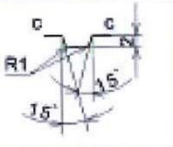
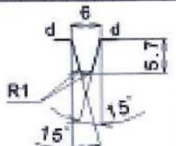
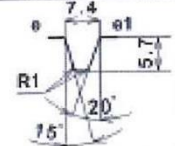
Empty Depth > 1.8mm : 22.95%

GROOVE SURFACE AREA = 358456 mm²

Control Surface = 20720 mm²

15" - 200/580R15



Sec. a-a	Sec. b-b	Sec. c-c
		
Sec. d-d	Sec. e-e1	
		

Class 9" (Rim 7.0")

Empty Depth > 5.5mm : 17.06%

Empty Depth > 1.8mm : 25.07%

Control Surface = 23800 mm²



18" - 210/645R18

KUMHO TYRES

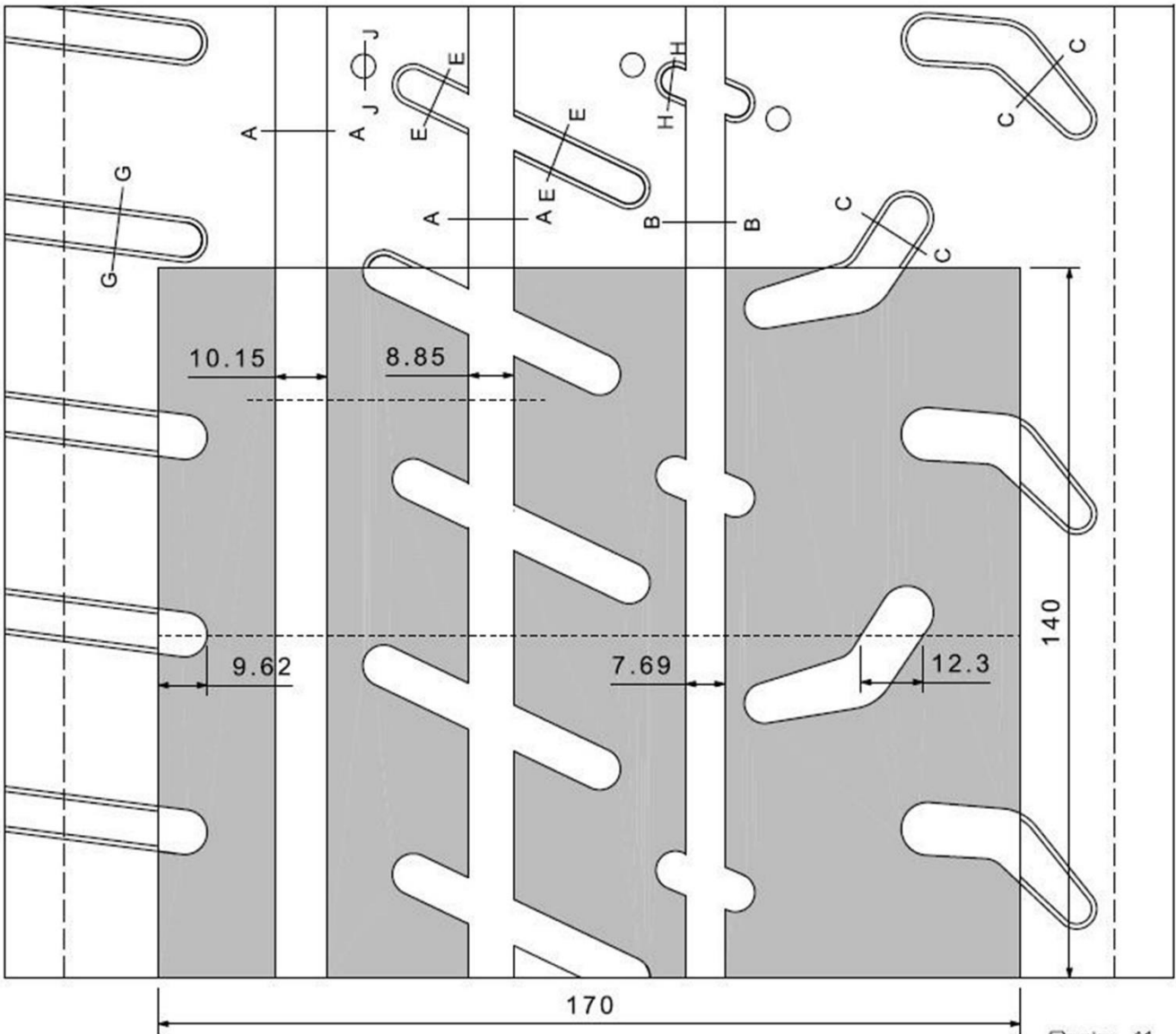
Moulded tyre for FIA homologation

Size : 210/645R18

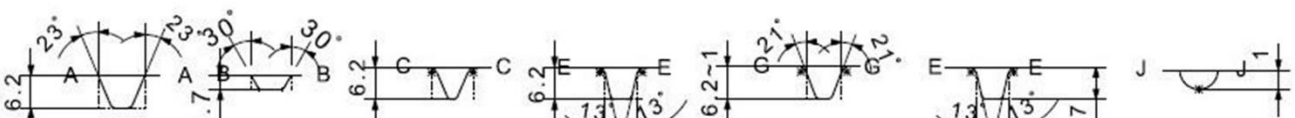
Pattern : TM01

On the basis of a tread pattern width of 170mm and circumference of 140mm

- * The surface taken up by grooves at least 5.5 mm deep, with a maximum angle of 60° between the block in section and 2mm wide, must occupy at least 17% of the total surface.
- * The surface taken up by grooves at least 1.8 mm deep, with a maximum angle of 60° between the block in section and 2mm wide, must occupy at least 21.5% of the total surface.
- * The sum of the width of the grooves encountered by a radial line must be at least 16mm
- * At least 2 circumferential lines / Minimum total width of circumferential lines at least 12mm



Groove Area by 170 x 140 at least 1.8mm deep : 5815.4mm²
 Void % : 24.4%
 Groove Area by 170 x 140 at least 5.5mm deep : 4580.7mm²
 Void % : 19.2%





KUMHO TYRES

18" - 210/645R18

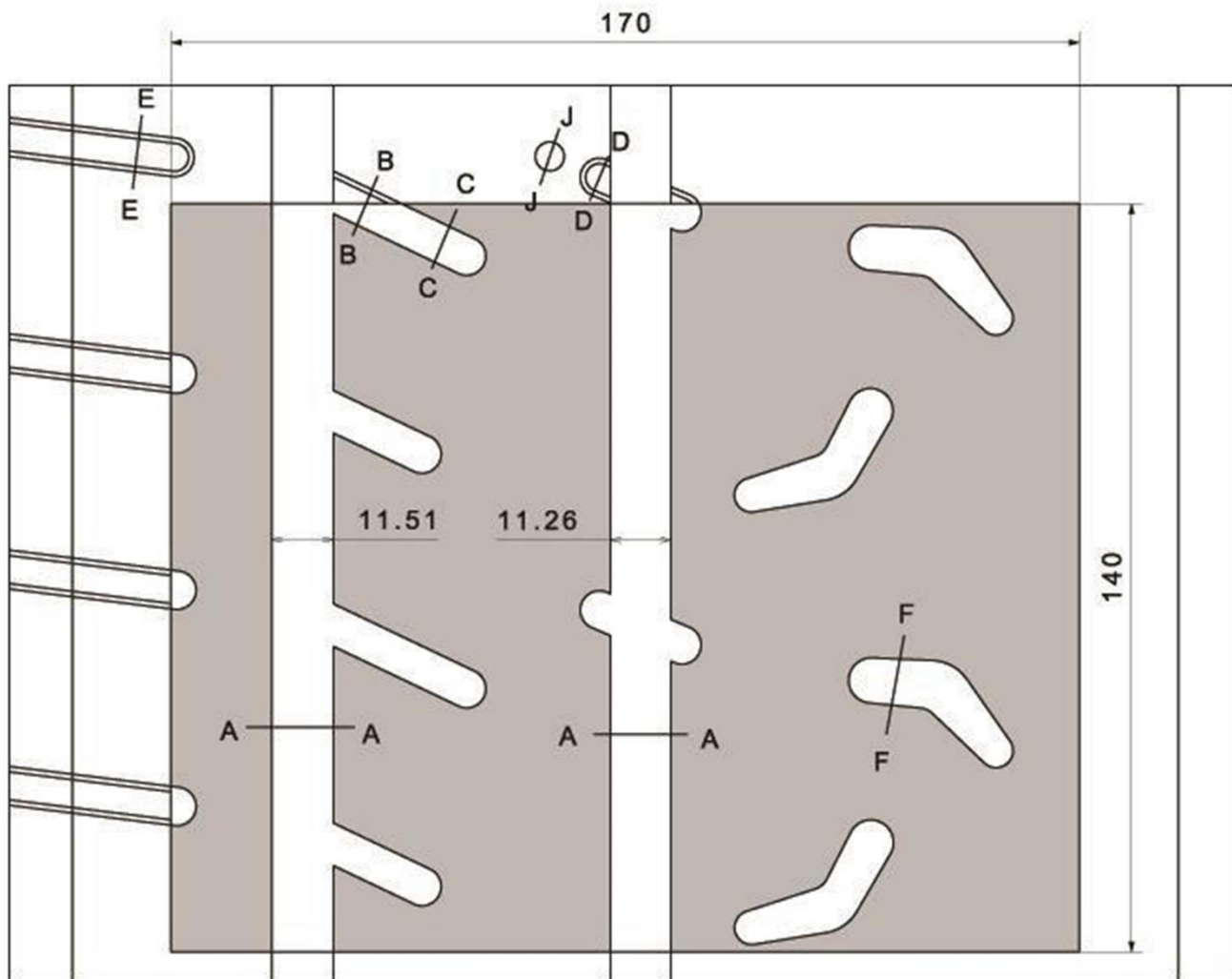
Moulded tyre for FIA homologation

Size : 210/645R18

Pattern : TM02

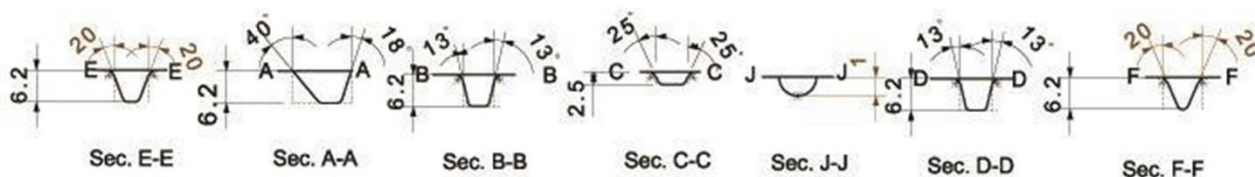
On the basis of a tread pattern width of 170mm and circumference of 140mm

- The surface taken up by grooves at least 5.5 mm deep, with a maximum angle of 60° between the block in section and 2mm wide, must occupy at least 17% of the total surface.
- The surface taken up by grooves at least 1.8 mm deep, with a maximum angle of 60° between the block in section and 2mm wide, must occupy at least 21.5% of the total surface.
- The sum of the width of the grooves encountered by a radial line must be at least 16mm
- At least 2 circumferential lines / Minimum total width of circumferential lines at least 12mm



Scale 1:1

Groove Area by 170 x 140 at least 1.8mm deep : 5159mm²
 Void % : 21.7%
 Groove Area by 170 x 140 at least 5.5mm deep : 4446mm²
 Void % : 18.7%





KUMHO TYRES

18" - 210/645R18

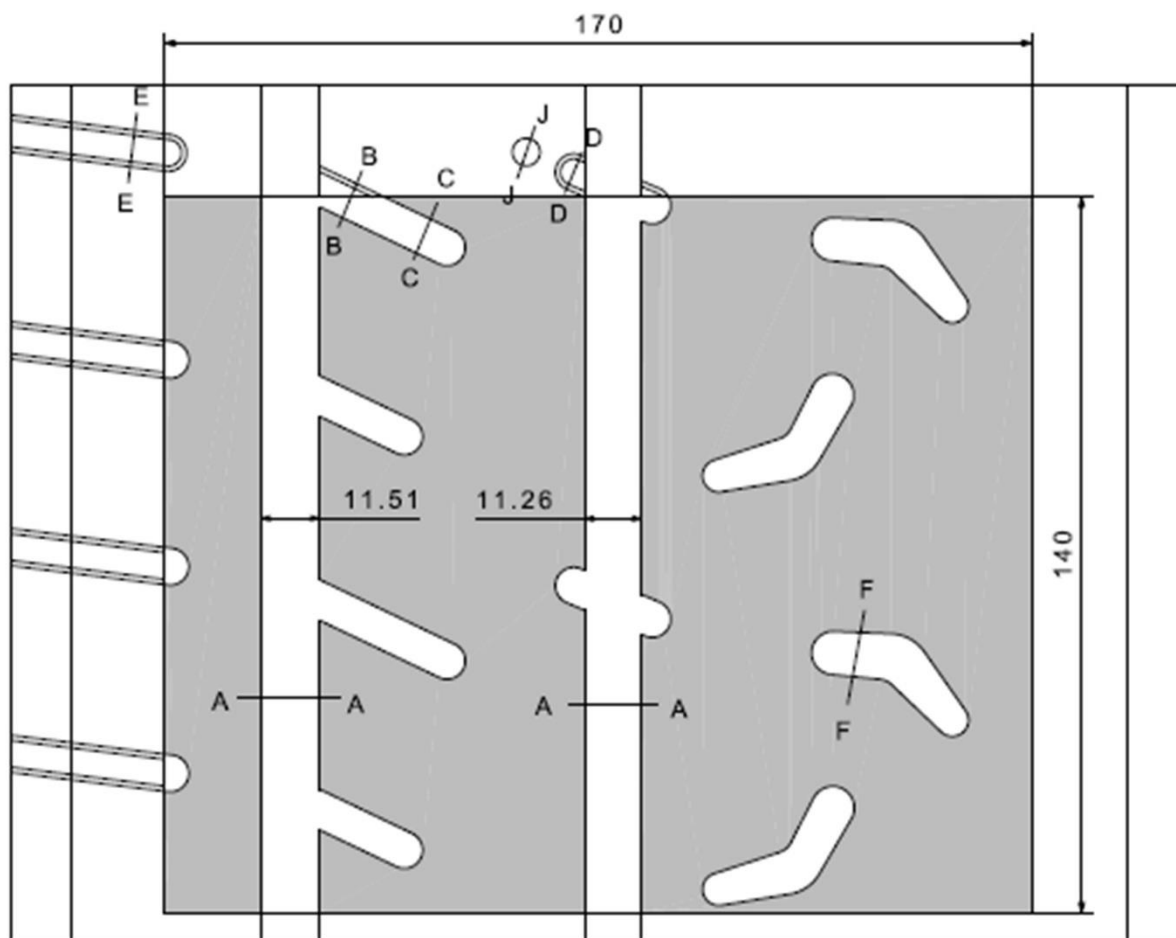
Moulded tyre for FIA homologation

Size : 210/645R18

Pattern : TM02

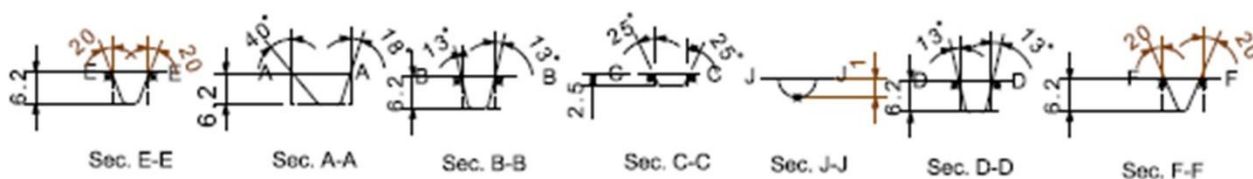
On the basis of a tread pattern width of 170mm and circumference of 140mm

- The surface taken up by grooves at least 5.5 mm deep, with a maximum angle of 60° between the block in section and 2mm wide, must occupy at least 17% of the total surface.
- The surface taken up by grooves at least 1.8 mm deep, with a maximum angle of 60° between the block in section and 2mm wide, must occupy at least 21.5% of the total surface.
- The sum of the width of the grooves encountered by a radial line must be at least 16mm
- At least 2 circumferential lines / Minimum total width of circumferential lines at least 12mm



Scale 1:1

Groove Area by 170 x 140 at least 1.8mm deep : 5159mm²
 Void % : 21.7%
 Groove Area by 170 x 140 at least 5.5mm deep : 4446mm²
 Void % : 18.7%

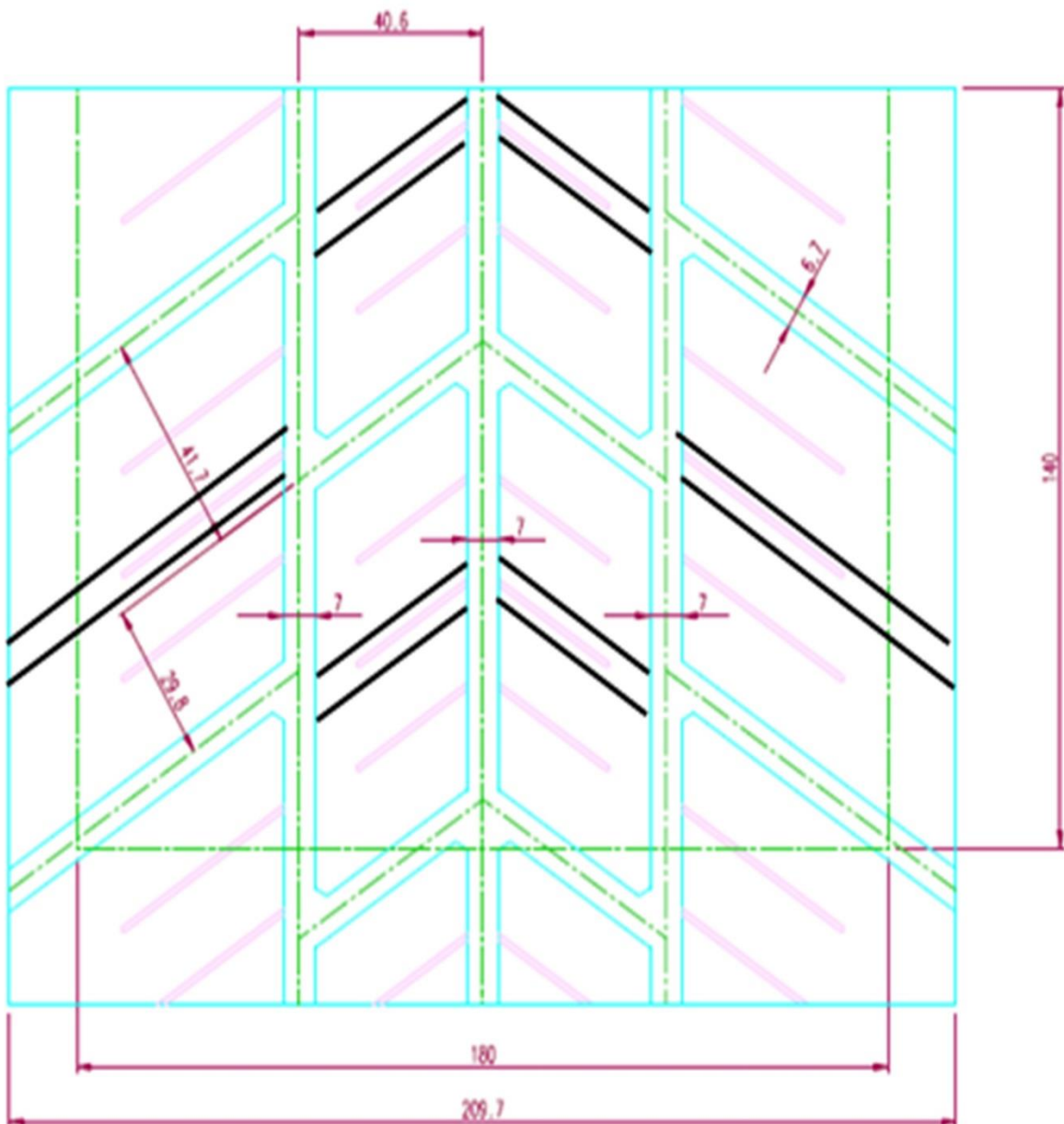




18" - 210/645R18

VÁLIDO ATÉ 31.12.2018

MODIFICATION OF EXISTING KUMHO TW02 TO GIVE >27.5% VOID (HANDCUT GROOVES 6.7mm)





KUMHO TYRES

17" - 190/630R17

NOVO

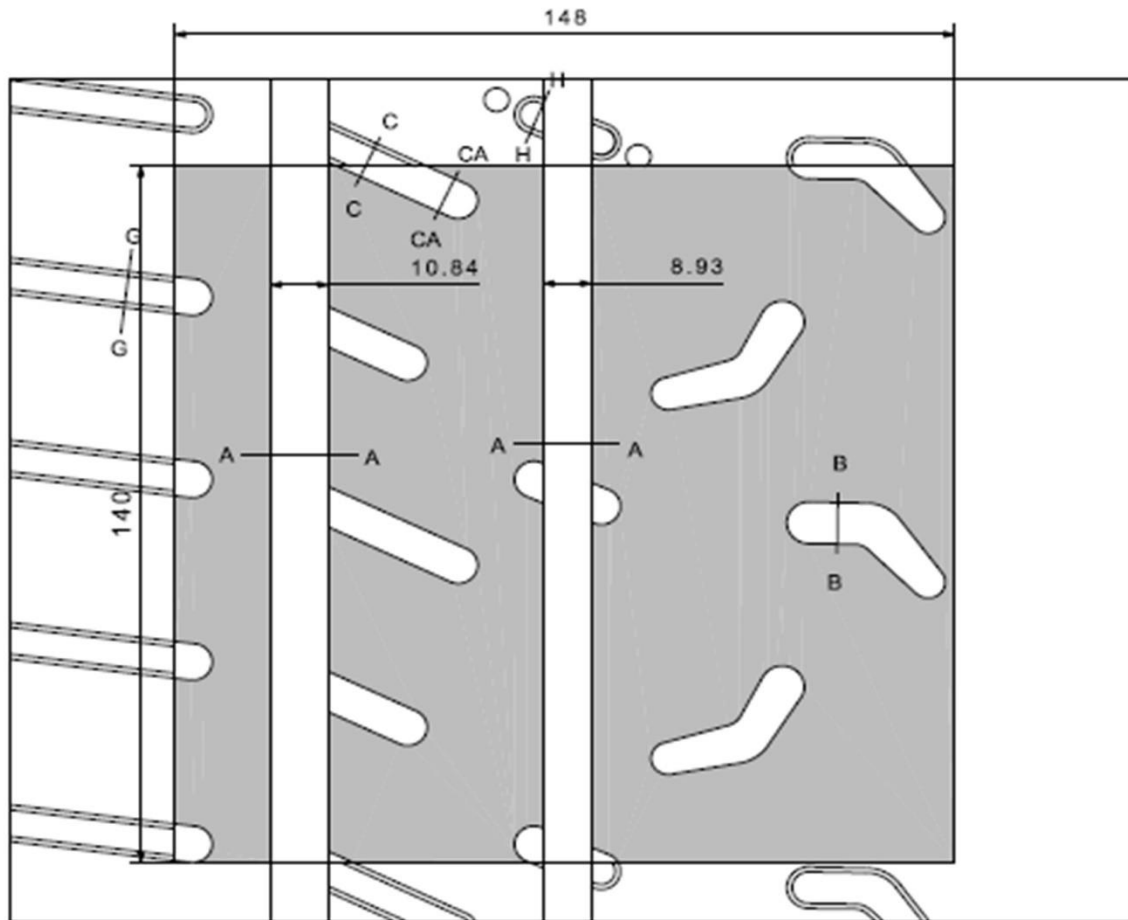
Moulded tyre for FIA homologation

Size : 190/630 R17

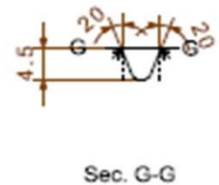
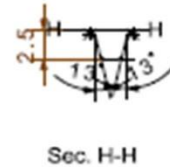
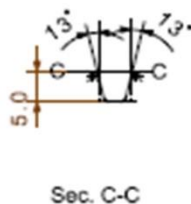
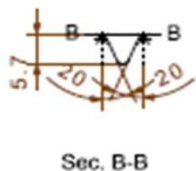
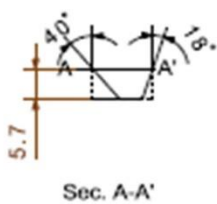
Pattern : TM02

On the basis of a tread pattern width of 148mm and circumference of 140mm

- The surface taken up by grooves at least 5.5 mm deep, with a maximum angle of 60° between the block in section and 2mm wide, must occupy at least 17% of the total surface.
- The surface taken up by grooves at least 1.8 mm deep, with a maximum angle of 60° between the block in section and 2mm wide, must occupy at least 21.5% of the total surface.
- The sum of the width of the grooves encountered by a radial line must be at least 16mm
- At least 2 circumferential lines / Minimum total width of circumferential lines at least 12mm



Groove Area by 148 x 140 at least 1.8mm deep : 4579.1mm²
 Void % : 22.1%
 Groove Area by 148 x 140 at least 5.5mm deep : 3688.1mm²
 Void % : 17.8%





KUMHO TYRES

16" - 190/600R16

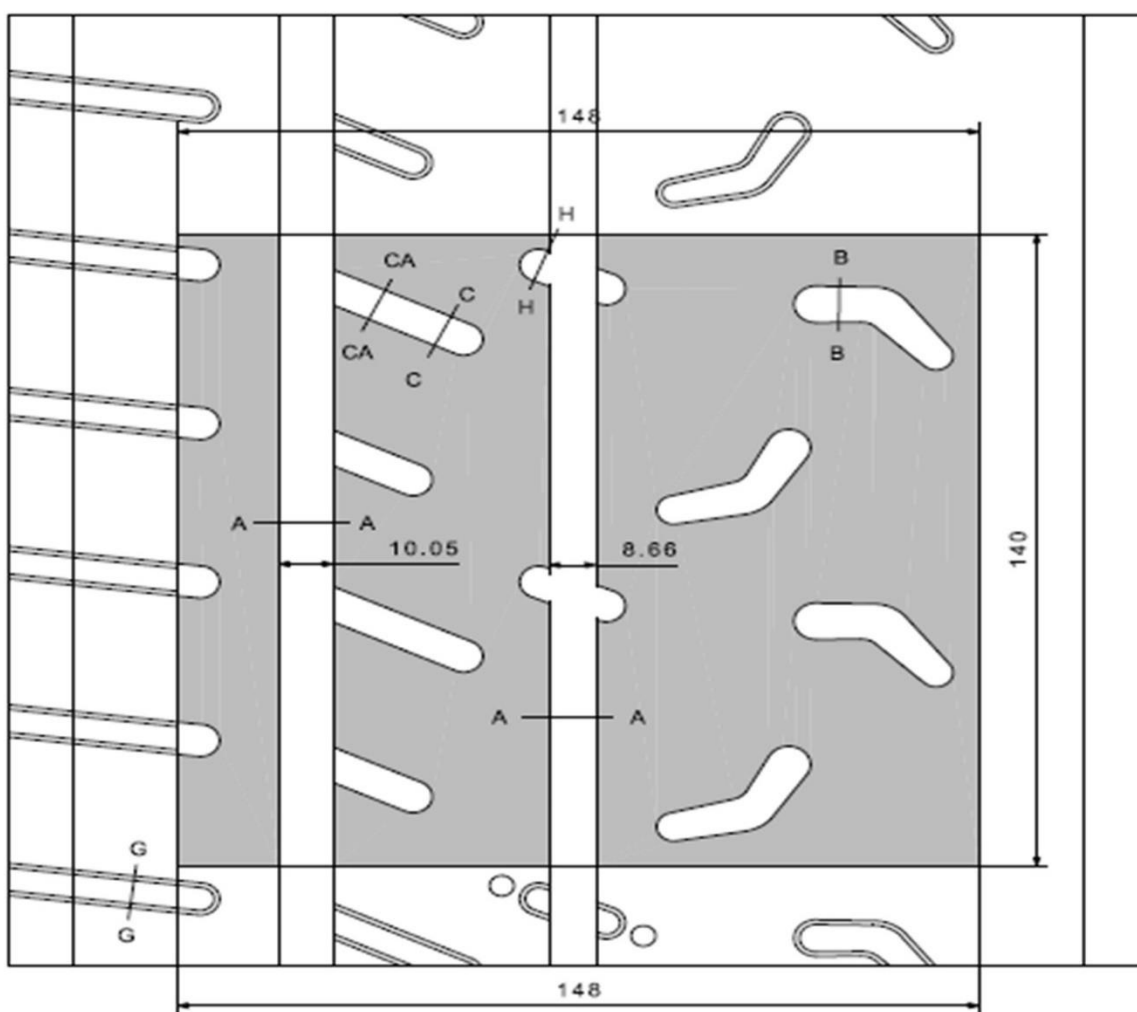
Moulded tyre for FIA homologation

Size : 190/600 R16

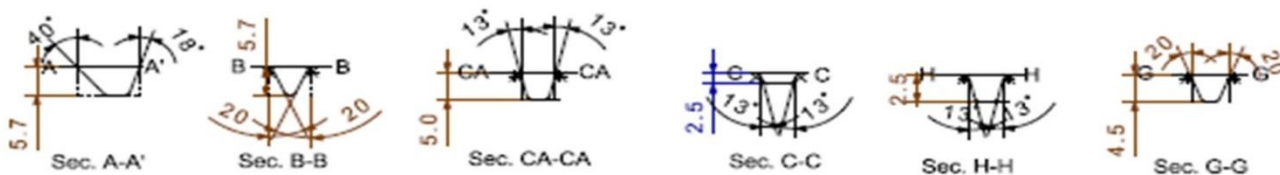
Pattern : TM02

On the basis of a tread pattern width of 148mm and circumference of 140mm

- The surface taken up by grooves at least 5.5 mm deep, with a maximum angle of 60° between the block in section and 2mm wide, must occupy at least 17% of the total surface.
- The surface taken up by grooves at least 1.8 mm deep, with a maximum angle of 60° between the block in section and 2mm wide, must occupy at least 21.5% of the total surface.
- The sum of the width of the grooves encountered by a radial line must be at least 16mm
- At least 2 circumferential lines / Minimum total width of circumferential lines at least 12mm



Groove Area by 148 x 140 at least 1.8mm deep : 4579.1mm²
 Void % : 22.1%
 Groove Area by 148 x 140 at least 5.5mm deep : 3584.5mm²
 Void % : 17.3%





KUMHO TYRES

15" - 180/580R15

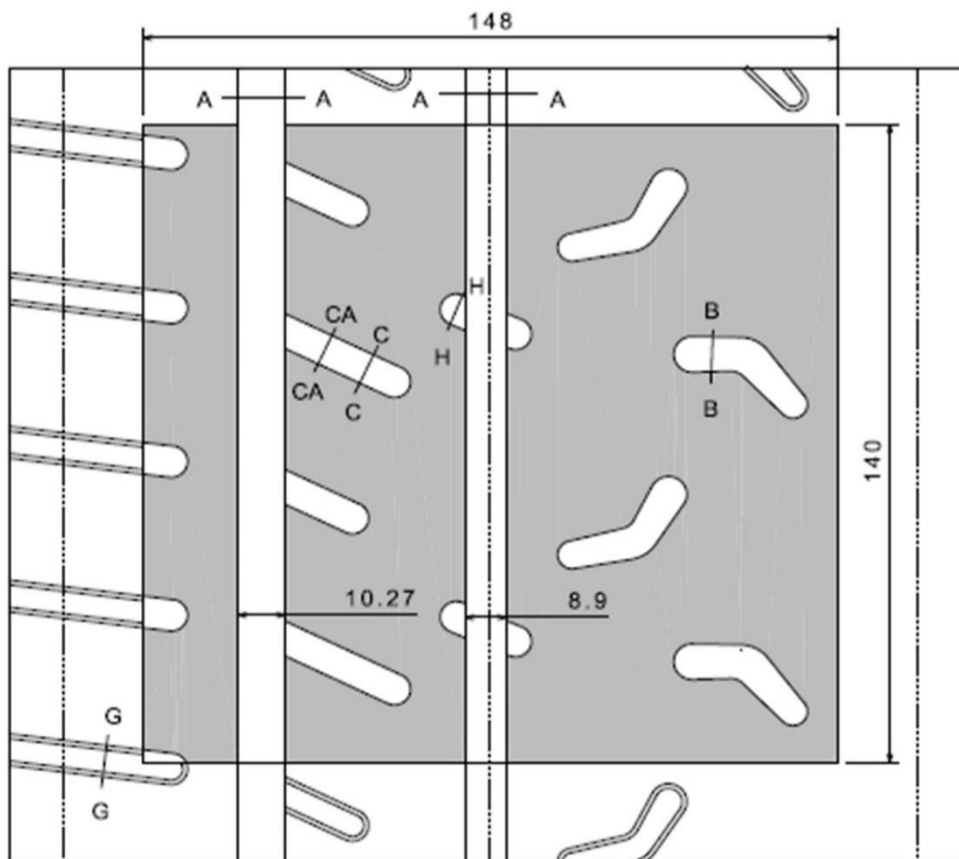
Moulded tyre for FIA homologation

Size : 180/580 R15

Pattern : TM02

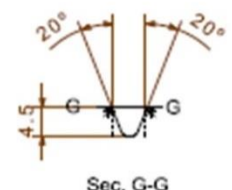
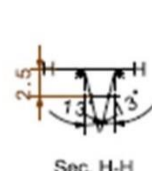
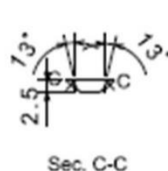
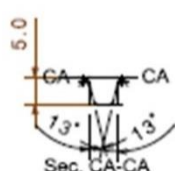
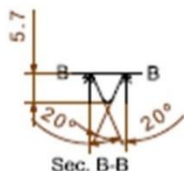
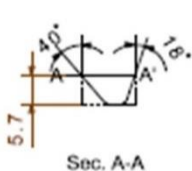
On the basis of a tread pattern width of 148mm and circumference of 140mm

- The surface taken up by grooves at least 5.5 mm deep, with a maximum angle of 60° between the block in section and 2mm wide, must occupy at least 17% of the total surface.
- The surface taken up by grooves at least 1.8 mm deep, with a maximum angle of 60° between the block in section and 2mm wide, must occupy at least 21.5% of the total surface.
- The sum of the width of the grooves encountered by a radial line must be at least 16mm
- At least 2 circumferential lines / Minimum total width of circumferential lines at least 12mm



Scale 1:1

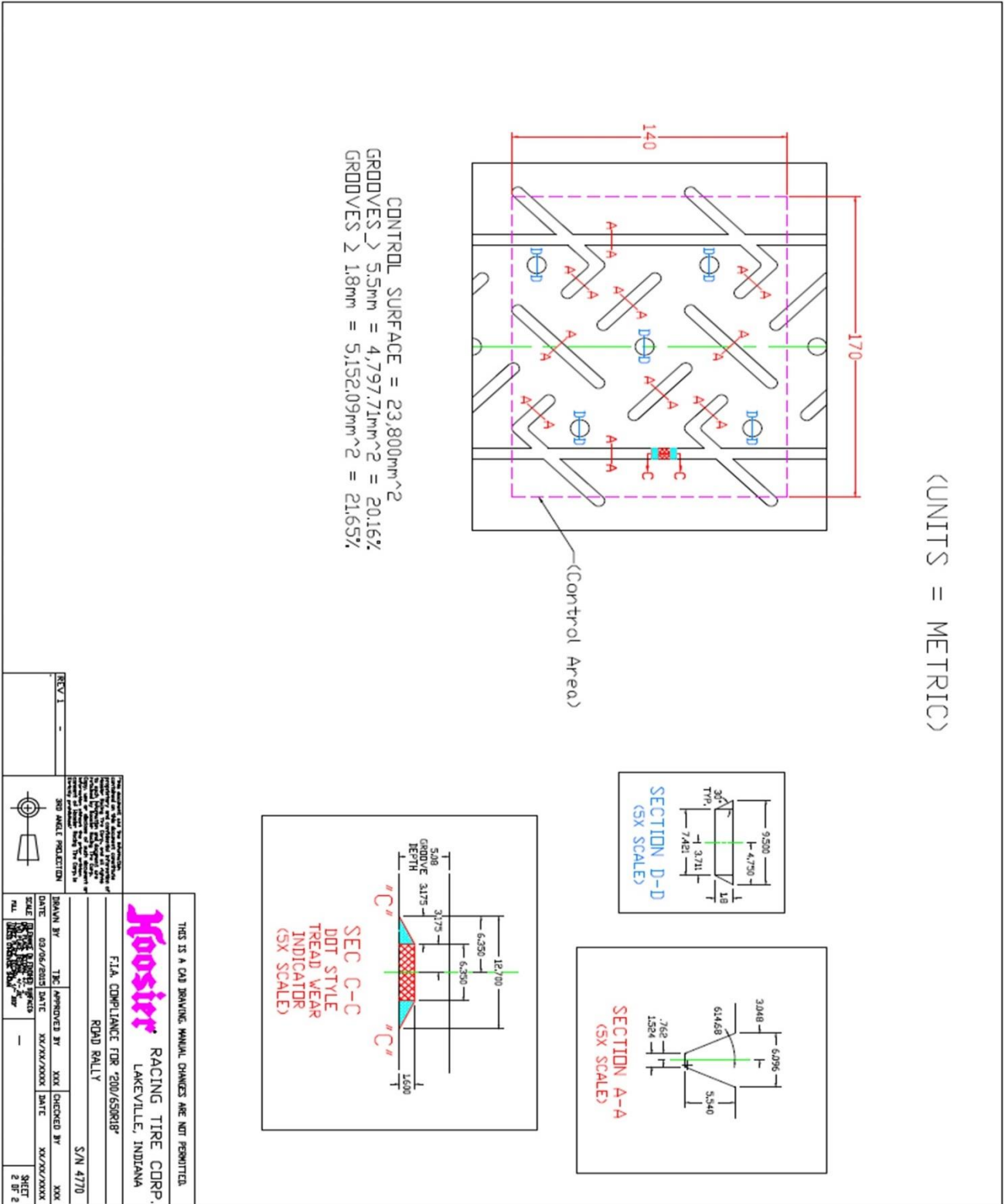
Groove Area by 148 x 140 at least 1.8mm deep : 4599.8mm²
 Void % : 22.2%
 Groove Area by 148 x 140 at least 5.5mm deep : 3563.8mm²
 Void % : 17.2%



Hoosier

RACING TIRE

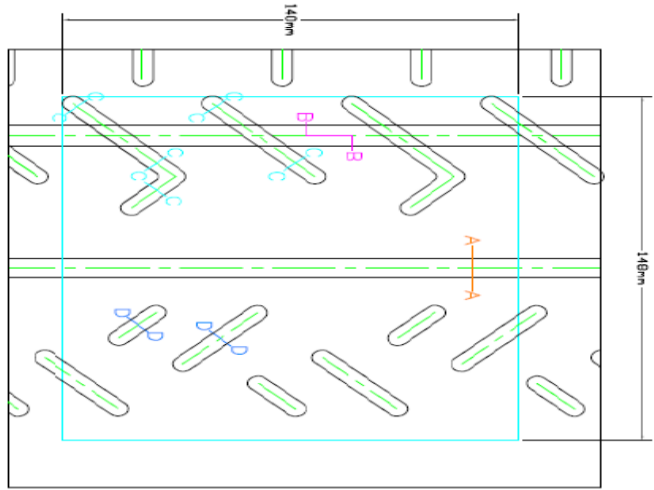
18" - 200/650R18



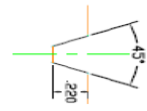
Hoosier

RACING TIRE

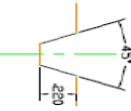
17" - 195/50R17



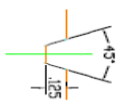
CONTROL SURFACE = $20,720\text{mm}^2$
 GROOVES >55mm DEEP = $3617,7\text{mm}^2 = 17,46\%$
 GROOVES >18MM DEEP = $4638,2\text{mm}^2 = 22,39\%$



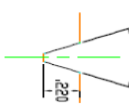
SEC A-A
(2X SCALE)



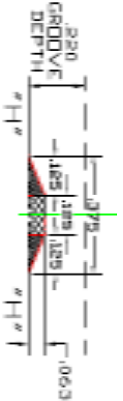
SEC B-B
(2X SCALE)



SEC C-C
(2X SCALE)

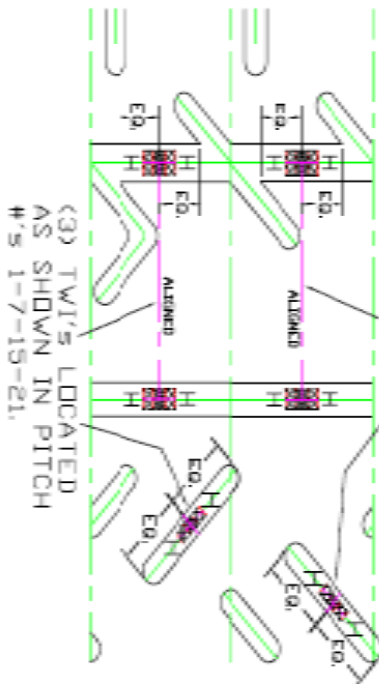


SEC D-D
(2X SCALE)



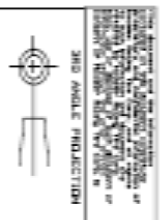
SEC H-H
DOT STYLE
TREAD WEAR
INDICATOR
(2X SCALE)

(8) TWI'S PER CIRCUMFL GROOVE
AND TREAD ELEMENTS AS SHOWN.
(24) TOTAL FOR THE MOLD.



(3) TWI'S LOCATED
AS SHOWN IN PITCH
#5 4-10-12-18

(3) TWI'S LOCATED
AS SHOWN IN PITCH
#5 1-7-15-21.



THIS IS A CAD DRAWING. MANUAL CHANGES ARE NOT PERMITTED.

Hoosier RACING TIRE CORP.
LAKEVILLE, INDIANA

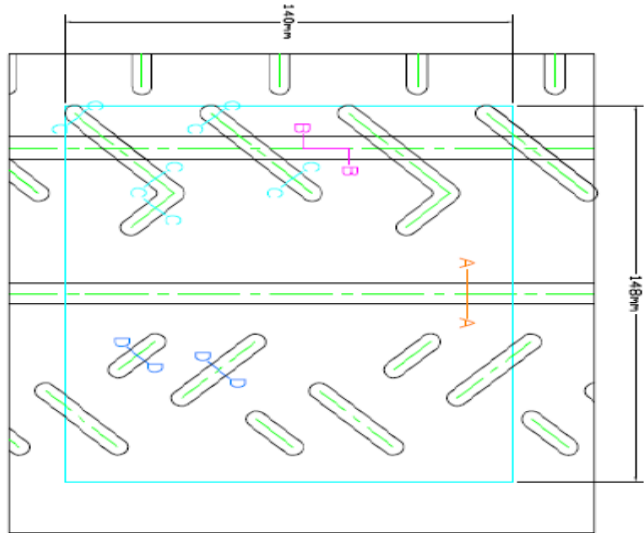
195/50R17 TARGAC RALLY

DATE	5A-09-2018	DATE	04-09-2018
SCALE	1:1	SCALE	1:1
DATE	04-09-2018	DATE	04-09-2018
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SCALE	1:1	SCALE	1:1

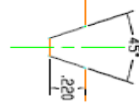
Hoosier

RACING TIRE

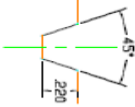
16" - 195/50R16



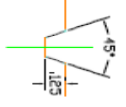
CONTROL SURFACE = $20,720\text{mm}^2$
 GROOVES >5.5mm DEEP = $3617,7\text{mm}^2$ = 17,46%
 GROOVES >1.9mm DEEP = $4638,2\text{mm}^2$ = 22,39%



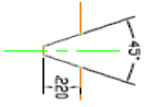
SEC A-A
(2X SCALE)



SEC B-B
(2X SCALE)



SEC C-C
(2X SCALE)



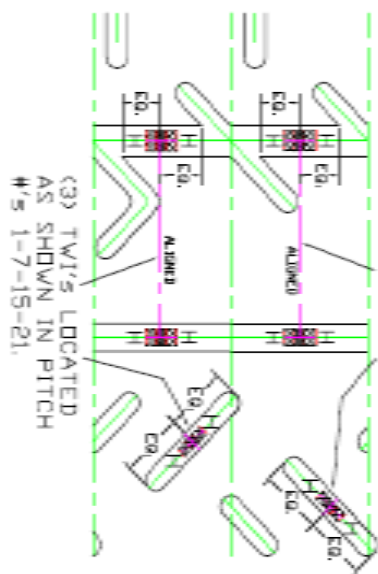
SEC D-D
(2X SCALE)



SEC H-H
DOT STYLE
TREAD WEAR
INDICATOR
(2X SCALE)

(8) TWI'S PER CIRCUMFL GROOVE
AND TREAD ELEMENTS AS SHOWN.
(24) TOTAL FOR THE MOLD.

(3) TWI'S LOCATED
AS SHOWN IN PITCH
#1-4-10-12-18



(3) TWI'S LOCATED
AS SHOWN IN PITCH
#1-5-1-7-15-21.

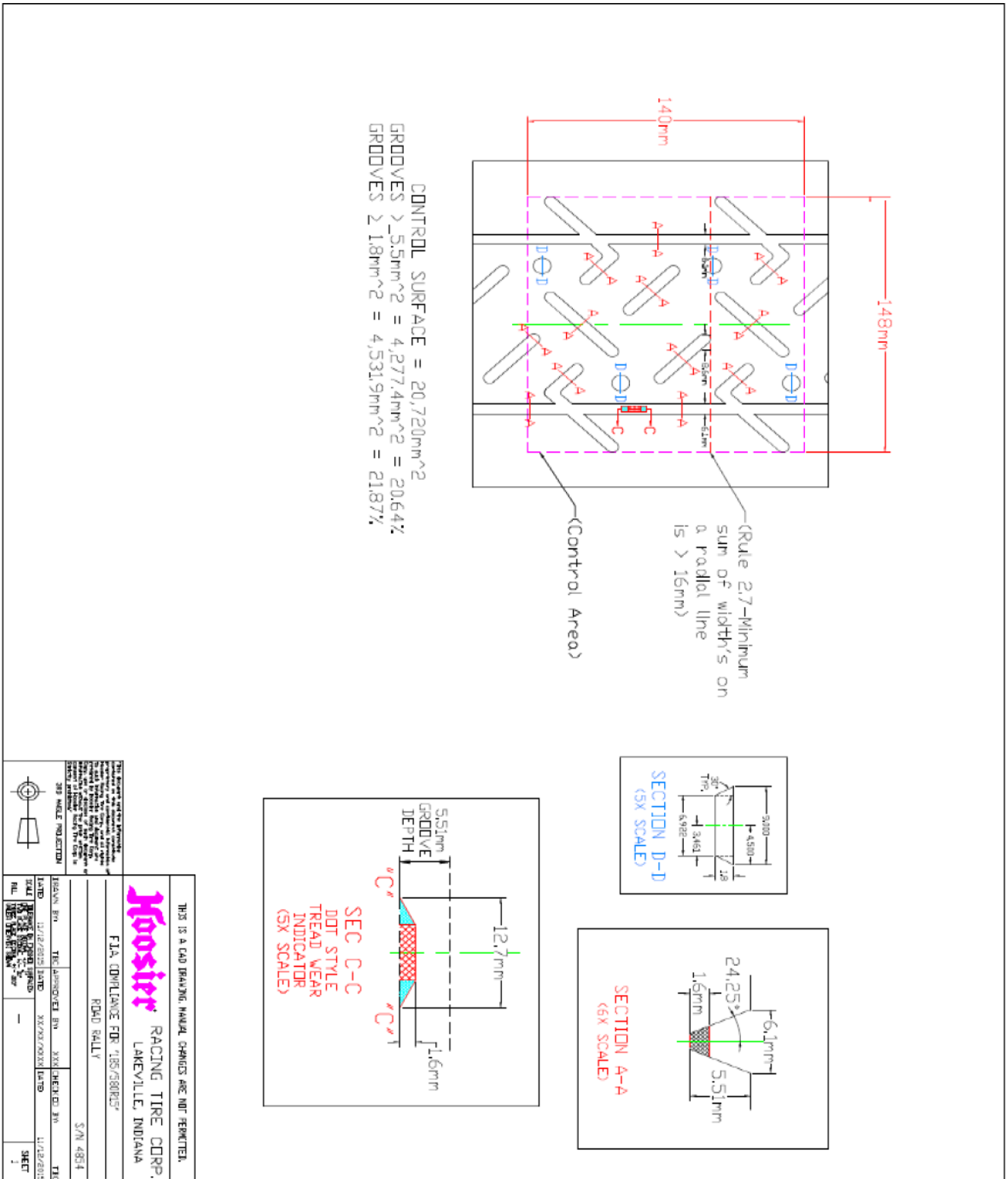
THIS IS A CAD DRAWING. MANUAL CHANGES ARE NOT PERMITTED.

Hoosier RACING TIRE CORP.
LAKEVILLE, INDIANA

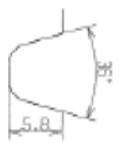
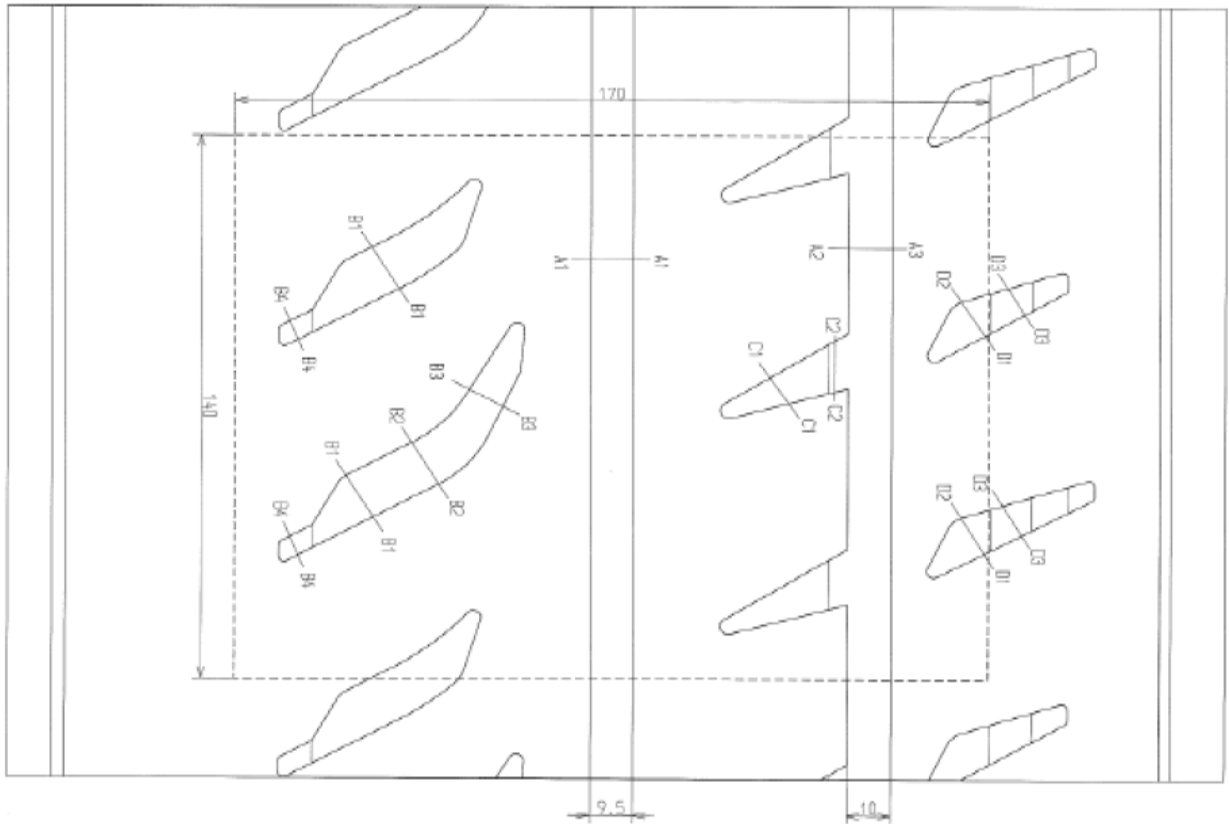
195/50R16 TARRAC RALLY 5/7R 4256

DESIGNED BY	RSB	APPROVED BY	XXX
DATE	04-02-2008	DATE	XX-XX-XXXX
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REV	1	SHEET	1

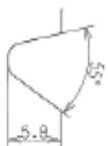
15" - 185/580R15



18" - 205/640R18



SEC.A1-A1



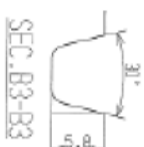
SEC.A2-A3



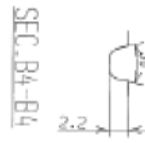
SEC.B1-B1



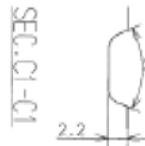
SEC.B2-B2



SEC.B3-B3



SEC.B4-B4



SEC.C1-C1



SEC.C2-C2



SEC.D1-D2



SEC.D3-D3

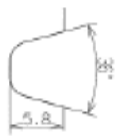
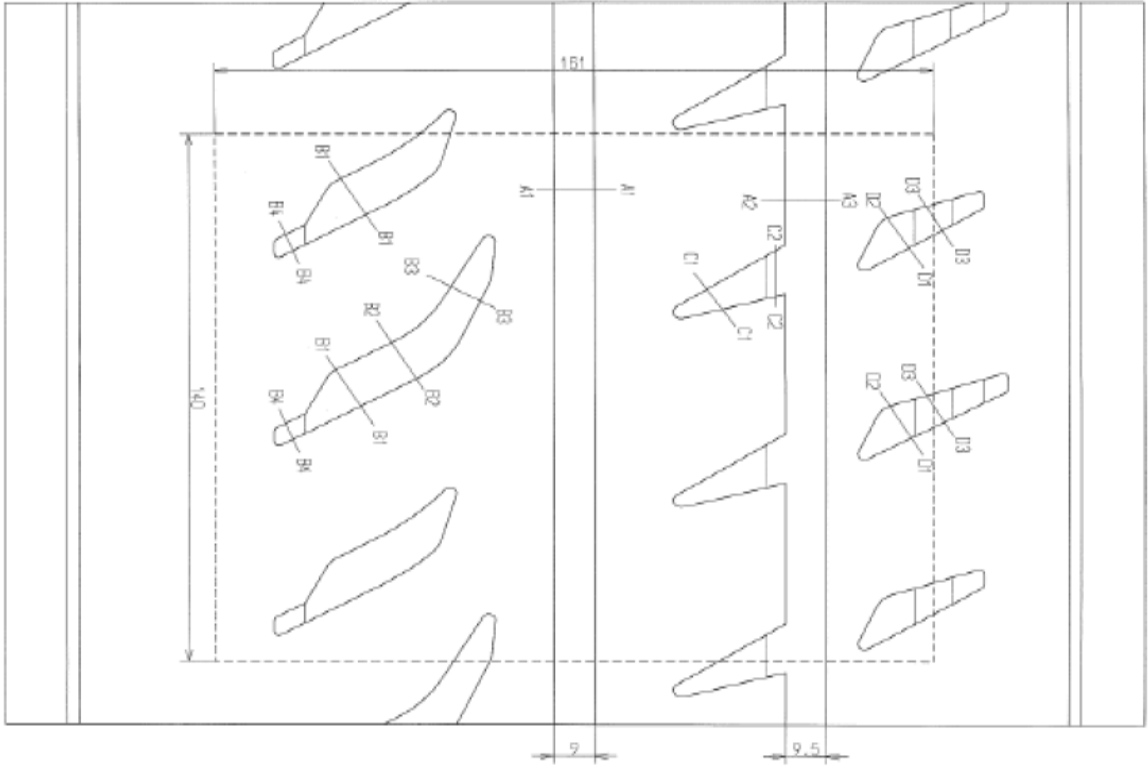
In the control area
5.5mm grooves - 18, 22
Total grooves 22, 36

-----Control area(170x140)

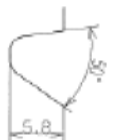
PRODUCT NAME
TOYO PROXES 888RT

SIZE 205/640R18

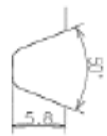
15" - 185/580R15



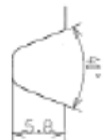
SEC.A1-A1



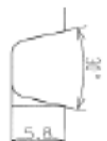
SEC.A2-A3



SEC.B1-B1



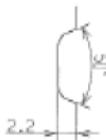
SEC.B2-B2



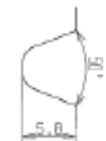
SEC.B3-B3



SEC.B4-B4



SEC.C1-C1



SEC.C2-C2



SEC.D1-D2



SEC.D3-D3

In the control area
5.5mm grooves - 18, 22
Total grooves 22, 3x

-----Control area (151 x 140)

PRODUCT NAME
TOYO PROXES 888RT

SIZE 185/580R15

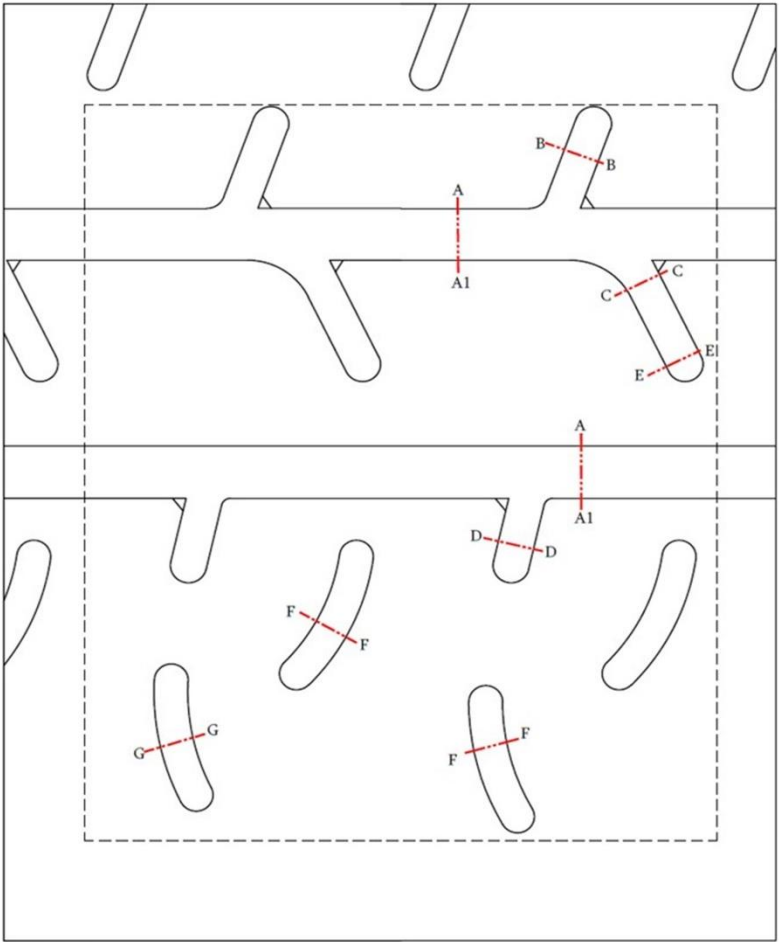


MRF TYRES

18" - 235/40R18



MRF 235/40R18 ZTA1 TL



In the control area 170x140 mm (Indicated in the dotted line)

Grooved area within Min. 1.8 deep grooves > 21.5%

Grooved area within Min. 5.5 deep grooves > 17.0%

The total width of the circumferential line is >12 mm

The sum of the width of the grooves encountered by a radial line is >16 mm

**CLASS 9"
RIM 8.0"**

S.No	DATE	DESCRIPTIONS	DRAWN	EVPRD / PDM

CHENNAI		INDIA	
DRAWN	G Krishnahar	APPROVED	T N Sundar
SIGNATURE	DE	EVPRD / PDM	NTS
DATE	25.01.18	EVPRD / PDM	29.01.18

F.I.A COMPLIANCE FOR 235/40R18 ZTA1 TL

CORPORATE TECHNICAL MOULD DESIGN	DRG No.	RR-235/40R18_0518	REVISION No.	00
SAP DOCUMENT TYPE:	SAP DOCUMENT No.		VER	

IF IN DOUBT ASK...
All dimensions are in mm, unless otherwise specified.

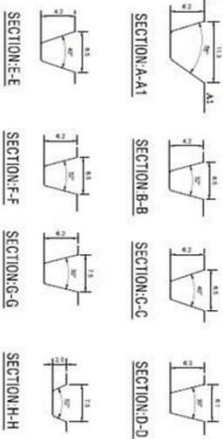
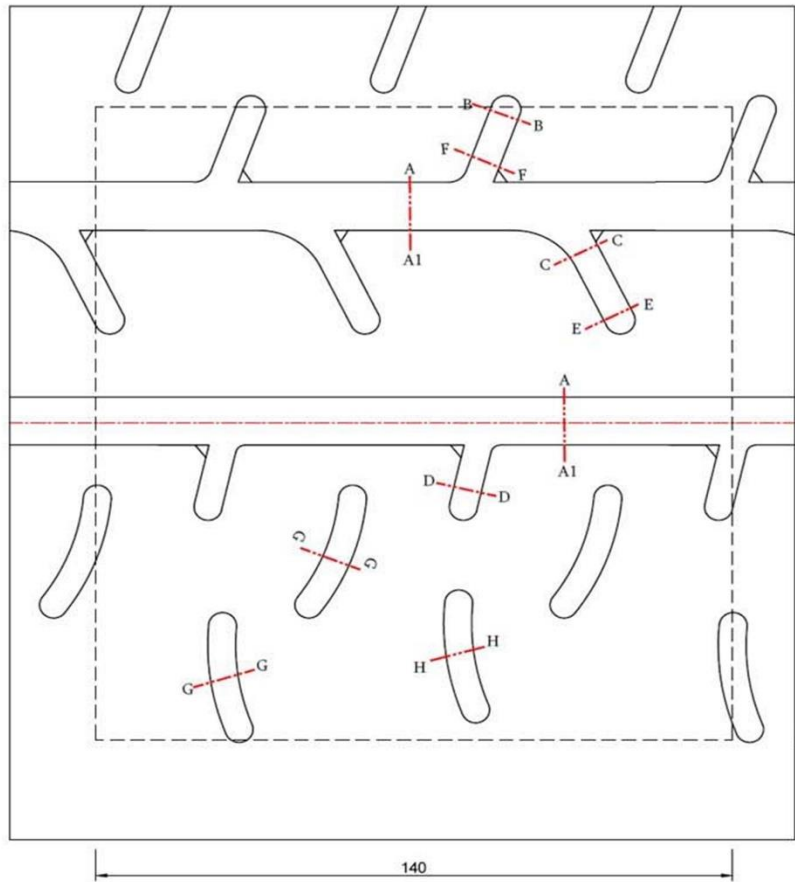
THE DRAWING IS THE PROPERTY OF MRF LTD. THE USE IS LIMITED WITH THE EXPRESS AGREEMENT THAT THE DRAWING AND INFORMATION THEREIN CONTAINED ARE THE PROPERTY OF THE MRF LTD. AND WILL NOT BE REPRODUCED, COPIED OR OTHERWISE MISUSED OR IN ANY MANNER. THE USER SHALL NOT BE HELD RESPONSIBLE FOR THE USE OF THIS DRAWING OR INFORMATION THEREIN. THE USER SHALL BE RESPONSIBLE FOR THE PROTECTION OF THIS DRAWING AND INFORMATION THEREIN. THE USER SHALL BE RESPONSIBLE FOR THE PROTECTION OF THIS DRAWING AND INFORMATION THEREIN. THE USER SHALL BE RESPONSIBLE FOR THE PROTECTION OF THIS DRAWING AND INFORMATION THEREIN.



17" - 205/45R17



MRF 205/45R17 ZTA1 TL



In the control area 148x140 mm (Indicated in the dotted line)

Grooved area within Min. 1.8 deep grooves > 21.5%

Grooved area within Min. 5.5 deep grooves > 17.0%

The total width of the circumferential line is >12 mm

The sum of the width of the grooves encountered by a radial line is >16 mm

**CLASS 8"
RIM 7.0"**

All dimensions are in mm. Unless otherwise specified.

THIS DRAWING IS THE PROPERTY OF MRF LTD. THIS DRAWING IS LOANED WITH THE EXPRESS AGREEMENT THAT THE DRAWING AND INFORMATION THEREIN CONTAINED ARE THE PROPERTY OF THE MRF LTD. AND WILL NOT BE REPRODUCED, COPIED OR OTHERWISE DISSEMINATED OR IN ANY MANNER AND WILL NOT BE USED IN WHOLE OR IN PART TO ASSIST IN MAKING OR TO FURNISH ANY INFORMATION FOR THE MAKING OF SIMILAR PARTS OR OTHER REPRODUCTIONS THEREOF OR FOR MAKING OF PARTS THEREOF EXCEPT WITH THE WRITTEN PERMISSION OF MRF LTD. FROM DRAWING AND SPEC. AS TO EACH CASE. THE ACCEPTANCE OF THIS DRAWING WILL BE CONSIDERED AS AN ACCEPTANCE OF THE FOREGOING AGREEMENT. THIS DRAWING IS TO BE RETURNED TO THE COMPANY OR ITS AUTHORIZED REPRESENTATIVE ON COMPLETION OF THE JOB.

NOT TO SCALE

S No.	DATE	DESCRIPTIONS	DRAWN	EVPRD / PDM



CHENNAI		INDIA	
DRAWN	G Krishnahar	APPROVED	T N Sundar
SIGNATURE	DE	EVPRD / PDM	
DATE	25.01.18		29.01.18

F.I.A COMPLIANCE FOR 205/45R17 ZTA1 TL

CORPORATE TECHNICAL MOULD DESIGN	DRG No.	RR-205/45R17_0518	REVISION No.	00
SAP DOCUMENT TYPE:	SAP DOCUMENT No.		VER	

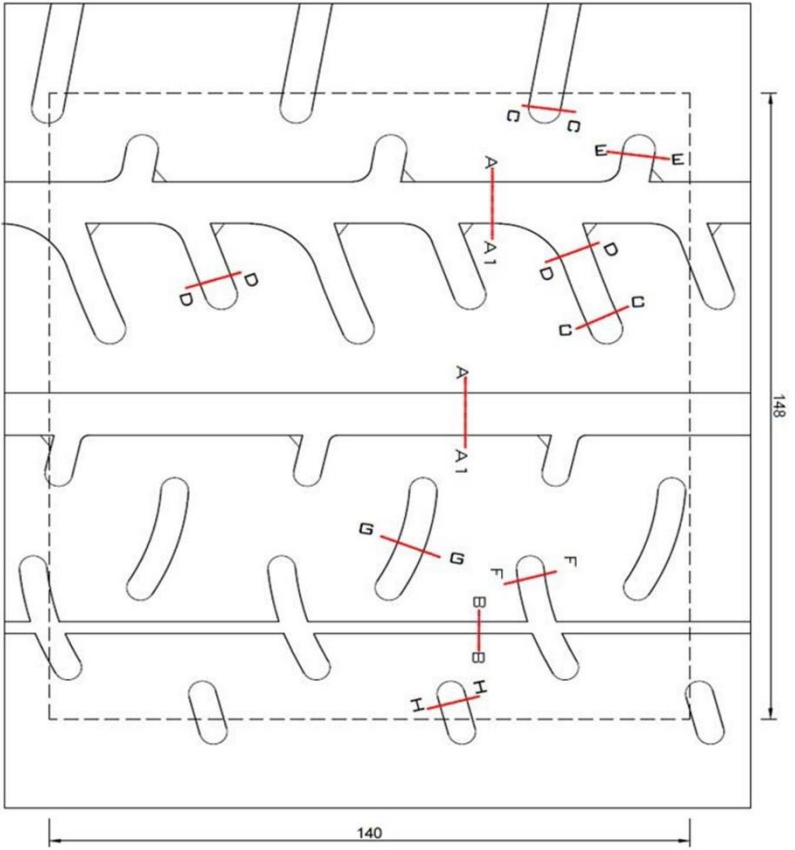


MRF TYRES

15" - 195/50R15



MRF 195/50R15 ZTA1 TL



148

140

In the control area 148x140 mm (indicated in the dotted line)

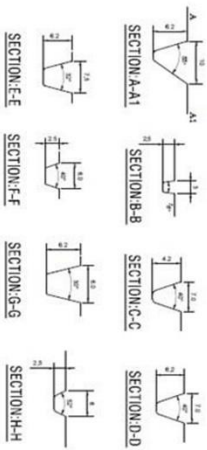
Grooved area within Min. 1.8 deep grooves > 21.5%

Grooved area within Min. 5.5 deep grooves > 17.0%

The total width of the circumferential line is >12 mm

The sum of the width of the grooves encountered by a radial line is >16 mm

**CLASS 8"
RIM 6.5"**



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DATE: 25.01.18

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F.I.A COMPLIANCE FOR 195/50R15 ZTA1 TL

CORPORATE TECHNICAL MOLDU DESIGN

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