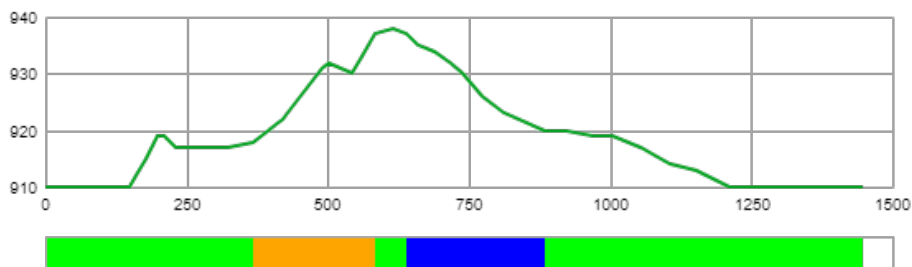




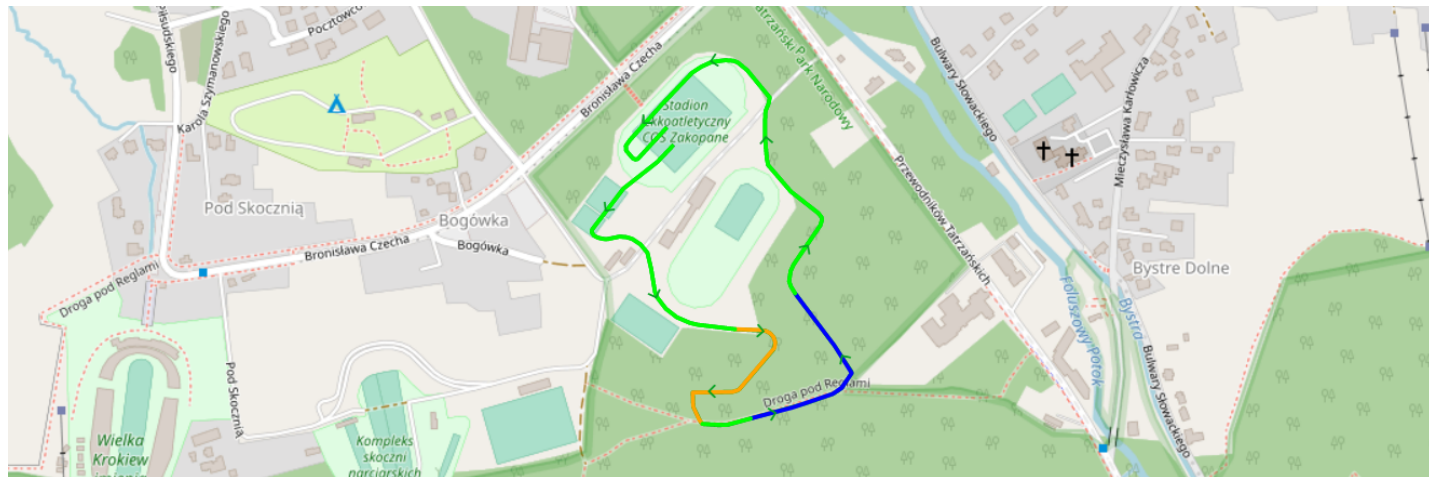
CERTIFICATE
OF FIS HOMOLOGATED CROSS-COUNTRY COURSE
FIS CROSS-COUNTRY COMMITTEE

(1) Registration number: 20/09.01/1.4
(2) Name of the competition site: COS Zakopane
(3) Name of city/region: Zakopane
(4) Organizer: TZN, COS
(5) National ski association: PZN
(6) Contact person in the organizing committee: Sebastian Danikiewicz
(7) Homologation inspector: Anna Guzik, Krzysztof Horecki
(8) Name of course: Sprint 1,4 km
(9) Competition level for course: COC

Course length:	1,447m	Height difference (HD):	28m	Lowest point:	910m
Course category:	D	Maximum climb (MC):	21m	Highest point:	938m
		Total climb (TC):	32m		



A-climb B-climb C-climb descent undulated terrain



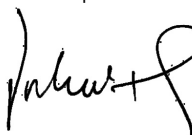
FIS Office


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FIS Homologation
Responsible


Vodrazka, Jakub

Date of Issue
24.01.2020
Valid until
30.06.2025

(10) Overview of the uphill:

	No.	PTC	% of TC
- shorter climbs	1	21	65.6
- descents	1	0	0.0
- undulated terrain	3	11	34.4

(11) Stadium area:

Fixed stadium area	yes
Fixed building	yes
Temporary stadium	no
Temporary building	no
Good infrastructure (access, parking, media, etc.)	yes
Skitesting area along course/near stadium	yes
Warm up track near the stadium	yes

Indoor working room:

Timekeeping	yes
Announcer	yes
Jury	yes
Race office	yes

(12) Category for the stadium and course layout:

	Interval	Sprint	Skiathlon	Relay	Mass start
Stadium suitable for following competition formats	yes	yes		yes	yes
Course suitable for following competition formats with					
a) Classical technique		yes			
b) Free technique		yes			
Course suitable for relay and skiathlon competition					
a) On same course					
b) Combined on different courses (C+D or D+D)					

(13) Possibility of snow making:

Full length of course can be prepared by the snow making system, (75 hydrants - every 40-50 m) 15 snow guns, 2 tanks with a capacity of 1500 cubic meters each.

(14) Map Material:

Very good.

(15) Source of accurate elevation data:

GPS professional instrument

(16) Safety considerations:

(17) General remarks:

Uphills are 9 m wide, undulated terrain 7.5 m, downhill 6 m wide.

Lighting along the entire net of courses (about 155 halogen lamps providing 30 - 35 Lux on the entire net of courses, and 4 multi-point reflectors on stadium, each 36m high, providing 1000 Lux at ground level on the stadium.

In general total length of 3km is covered with pavement surface, 4 m wide asphalt (on the curves of downhill sections and on the junctions - up to 7 m).

(18) Date of first inspection: 2019/7/5

(19) Date of final inspection: 2019/12/12

(20) Summary of terrain characteristics

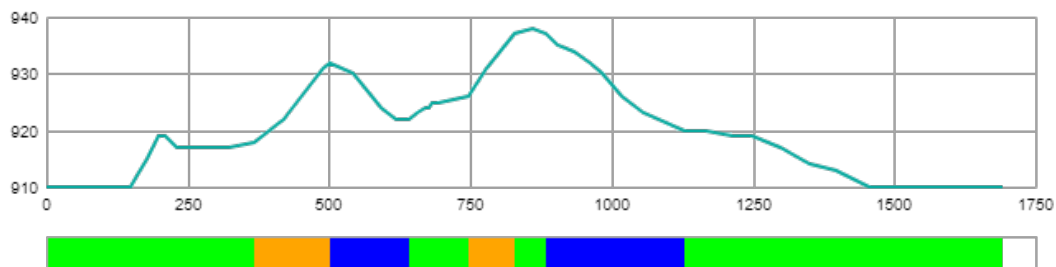
	#	at m	PHD (m)	PTC (m)	grad. (%)	avg. grad.(%)	
A-climb	1			0			0.0% part of TC
B-climb	1	366	19	21	-4.8 - 17.7	8.8	
				21			65.6% part of TC
C-climb				0			0.0% part of TC
undulated terrain				11			34.4% part of TC
				32			



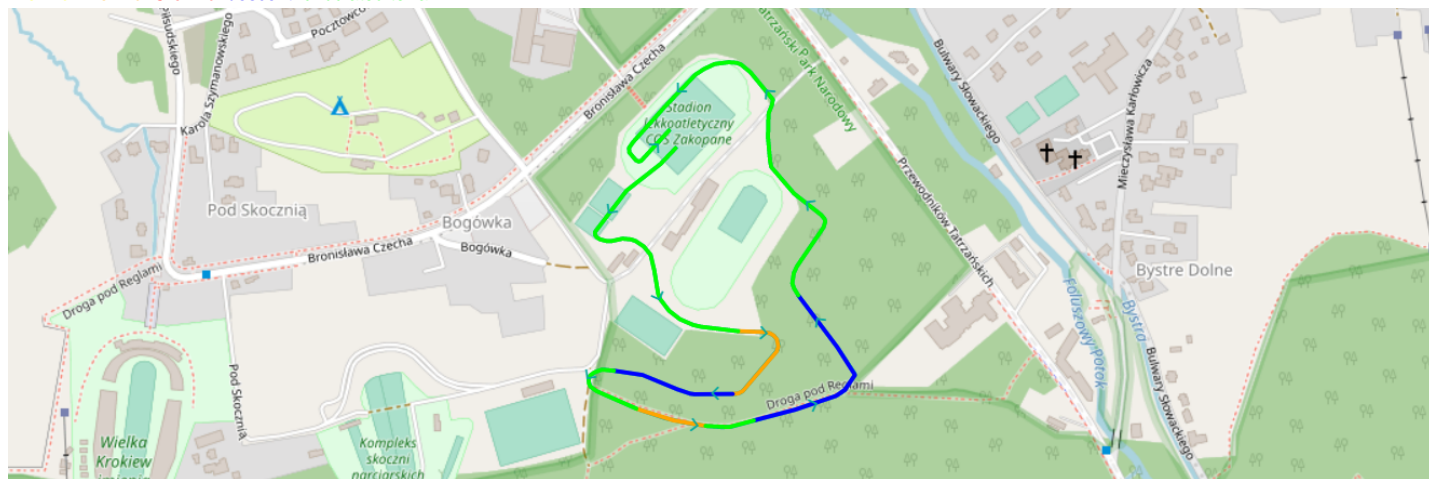
**CERTIFICATE
OF FIS HOMOLOGATED CROSS-COUNTRY COURSE
FIS CROSS-COUNTRY COMMITTEE**

(1) Registration number:	20/09.02/1.7
(2) Name of the competition site:	COS Zakopane
(3) Name of city/region:	Zakopane
(4) Organizer:	TZN, COS
(5) National ski association:	PZN
(6) Contact person in the organizing committee:	Sebastian Danikiewicz
(7) Homologation inspector:	Anna Guzik, Krzysztof Horecki
(8) Name of course:	Sprint 1,7
(9) Competition level for course	COC

Course length:	1,692m	Height difference (HD):	28m	Lowest point:	910m
Course category:	D	Maximum climb (MC):	14m	Highest point:	938m
		Total climb (TC):	40m		



A-climb B-climb C-climb descent undulated terrain



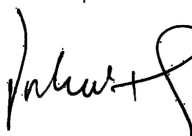
FIS Office


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Blochstrasse 2 / Postfach
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Responsible


Vodrazka, Jakub

Date of Issue

24.01.2020
Valid until
30.06.2025

(10) Overview of the uphill:

	No.	PTC	% of TC
- shorter climbs	2	25	62.5
- descents	2	0	0.0
- undulated terrain	4	15	37.5

(11) Stadium area:

		Indoor working room:	
Fixed stadium area	yes	Timekeeping	yes
Fixed building	yes	Announcer	yes
Temporary stadium	no	Jury	yes
Temporary building	no	Race office	yes
Good infrastructure (access, parking, media, etc.)	yes		
Skitesting area along course/near stadium	yes		
Warm up track near the stadium	yes		

(12) Category for the stadium and course layout:

	Interval	Sprint	Skiathlon	Relay	Mass start
Stadium suitable for following competition formats	yes	yes		yes	yes
Course suitable for following competition formats with					
a) Classical technique		yes			
b) Free technique		yes			
Course suitable for relay and skiathlon competition					
a) On same course					
b) Combined on different courses (C+D or D+D)					

(13) Possibility of snow making:

Full length of course can be prepared by the snow making system, (75 hydrants - every 40-50 m) 15 snow guns, 2 tanks with a capacity of 1500 cubic meters each.

(14) Map Material:

Very good.

(15) Source of accurate elevation data:

GPS professional instrument

(16) Safety considerations:

Pay attention to the left curve after the first downhill ...

(17) General remarks:

Uphills are 9 m wide, undulated terrain 7.5 m, downhill 6 m wide.

Lighting along the entire net of courses (about 155 halogen lamps providing 30 - 35 Lux on the entire net of courses, and 4 multi-point reflectors on stadium, each 36m high, providing 1000 Lux at ground level on the stadium.

In general total length of 3km is covered with pavement surface, 4 m wide asphalt (on the curves of downhill sections and on the junctions - up to 7 m).

(18) Date of first inspection: 2019/7/5

(19) Date of final inspection: 2019/12/12

(20) Summary of terrain characteristics

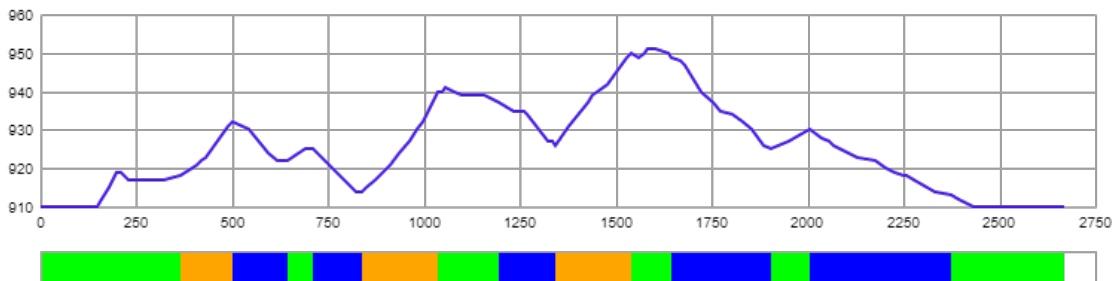
	#	at m	PHD (m)	PTC (m)	grad. (%)	avg. grad.(%)	
A-climb	■	total		0			0.0% part of TC
B-climb	■	1	366	14	14	6.9 - 13.4	10.4
		2	745	11	11	12.6 - 14.3	13.3
		total			25		
C-climb	■	total		0			0.0% part of TC
undulated terrain	■	total		15			37.5% part of TC
		total climb		40			



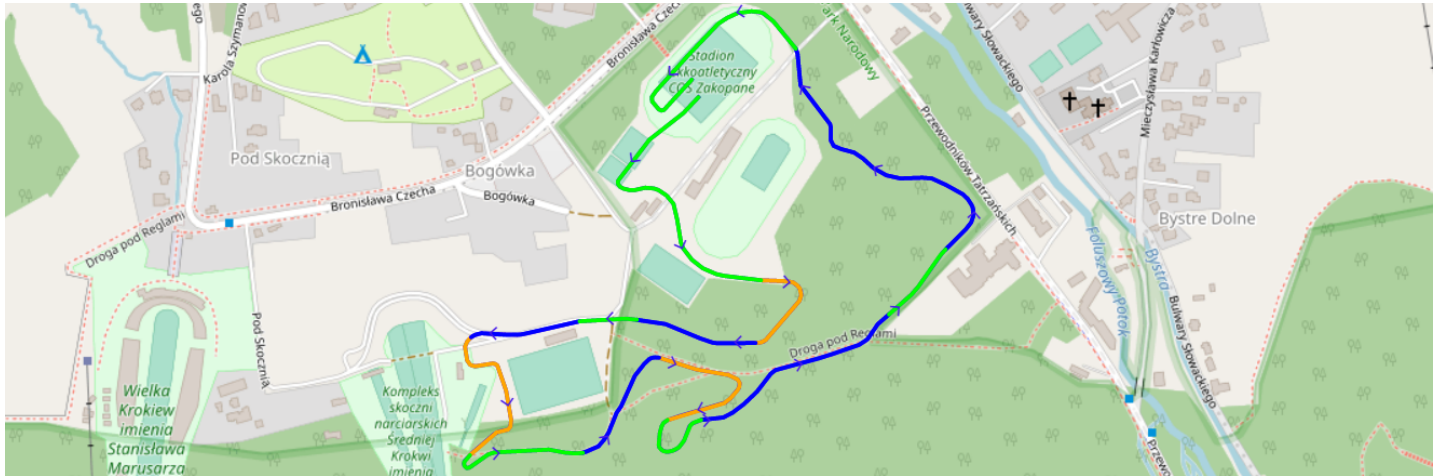
**CERTIFICATE
OF FIS HOMOLOGATED CROSS-COUNTRY COURSE
FIS CROSS-COUNTRY COMMITTEE**

(1) Registration number:	20/09.03/2.5
(2) Name of the competition site:	COS Zakopane
(3) Name of city/region:	Zakopane
(4) Organizer:	TZN, COS
(5) National ski association:	PZN
(6) Contact person in the organizing committee:	Sebastian Danikiewicz
(7) Homologation inspector:	Anna Guzik, Krzysztof Horecki
(8) Name of course:	2,5 km A
(9) Competition level for course	COC

Course length:	2,671m	Height difference (HD):	41m	Lowest point:	910m
Course category:	D	Maximum climb (MC):	26m	Highest point:	951m
		Total climb (TC):	85m		



A-climb B-climb C-climb descent undulated terrain



FIS Office

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Vodrazka, Jakub

Date of Issue

24.01.2020

Valid until

30.06.2025

(10) Overview of the uphill:

	No.	PTC	% of TC
- shorter climbs	3	64	75.3
- descents	5	0	0.0
- undulated terrain	6	21	24.7

(11) Stadium area:

		Indoor working room:	
Fixed stadium area	yes	Timekeeping	yes
Fixed building	yes	Announcer	yes
Temporary stadium	no	Jury	yes
Temporary building	no	Race office	yes
Good infrastructure (access, parking, media, etc.)	yes		
Skitesting area along course/near stadium	yes		
Warm up track near the stadium	yes		

(12) Category for the stadium and course layout:

	Interval	Sprint	Skiathlon	Relay	Mass start
Stadium suitable for following competition formats	yes	yes		yes	yes
Course suitable for following competition formats with					
a) Classical technique	yes				yes
b) Free technique	yes				yes
Course suitable for relay and skiathlon competition					
a) On same course					
b) Combined on different courses (C+D or D+D)					

(13) Possibility of snow making:

Full length of course can be prepared by the snow making system, (75 hydrants - every 40-50 m) 15 snow guns, 2 tanks with a capacity of 1500 cubic meters each.

(14) Map Material:

Very good.

(15) Source of accurate elevation data:

GPS professional instrument

(16) Safety considerations:

No.

(17) General remarks:

Uphills are 9 m wide, undulated terrain 7.5 m, downhill 6 m wide.

Lighting along the entire net of courses (about 155 halogen lamps providing 30 - 35 Lux on the entire net of courses, and 4 multi-point reflectors on stadium, each 36m high, providing 1000 Lux at ground level on the stadium.

In general total length of 3km is covered with pavement surface, 4 m wide asphalt (on the curves of downhill sections and on the junctions - up to 7 m).

(18) Date of first inspection: 2019/7/5

(19) Date of final inspection: 2019/12/12

(20) Summary of terrain characteristics

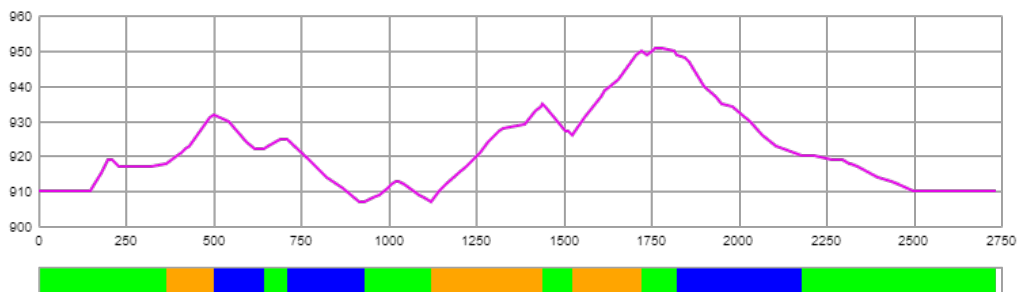
	#	at m	PHD (m)	PTC (m)	grad. (%)	avg. grad.(%)	
A-climb	■	total		0			0.0% part of TC
B-climb	■	1	366	14	14	6.9 - 13.4	10.4
		2	837	26	26	7.6 - 19.7	13.1
		3	1,344	24	24	6.8 - 15.1	12.1
		total		64			75.3%
C-climb	■	total		0			0.0% part of TC
undulated terrain	■	total		21			24.7% part of TC
		total climb		85			



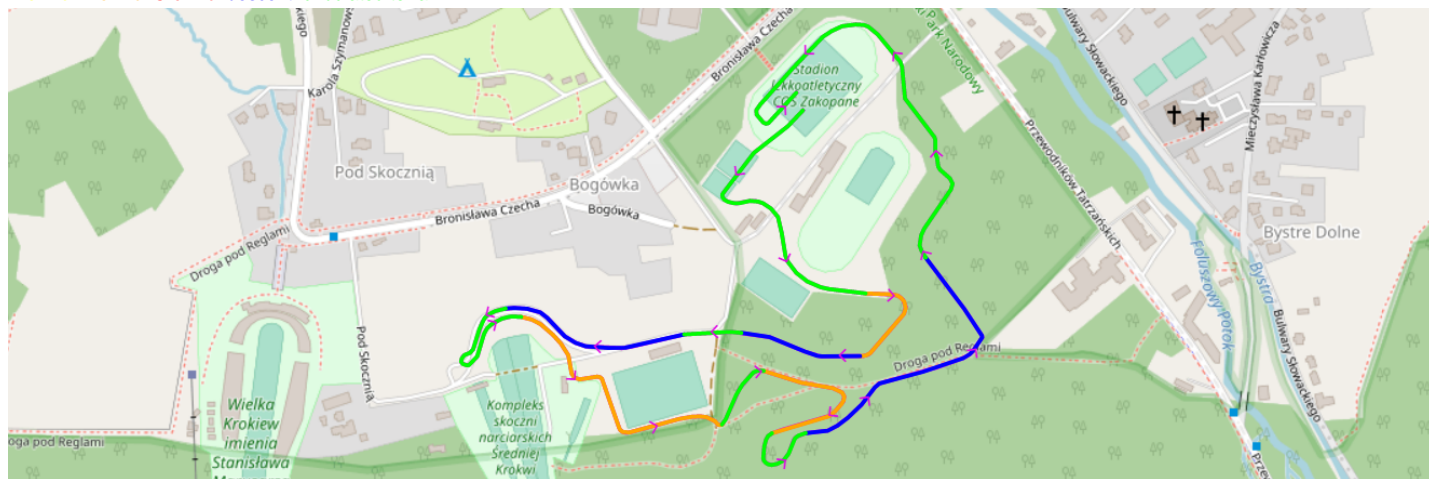
CERTIFICATE
OF FIS HOMOLOGATED CROSS-COUNTRY COURSE
FIS CROSS-COUNTRY COMMITTEE

(1) Registration number:	20/09.04/2.5
(2) Name of the competition site:	COS Zakopane
(3) Name of city/region:	Zakopane
(4) Organizer:	TZN, COS
(5) National ski association:	PZN
(6) Contact person in the organizing committee:	Sebastian Danikiewicz
(7) Homologation inspector:	Anna Guzik, Krzysztof Horecki
(8) Name of course:	2,5 km B
(9) Competition level for course:	COC

Course length:	2,735m	Height difference (HD):	44m	Lowest point:	907m
Course category:	D	Maximum climb (MC):	28m	Highest point:	951m
		Total climb (TC):	87m		



A-climb B-climb C-climb descent undulated terrain



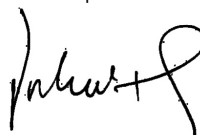
FIS Office


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FIS International Ski Federation
Blochstrasse 2 / Postfach
CH - 3653 Oberhofen

FIS Stamp



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Responsible


Vodrazka, Jakub

Date of Issue

24.01.2020
Valid until
30.06.2025

(10) Overview of the uphill:

	No.	PTC	% of TC
- shorter climbs	3	66	75.9
- descents	3	0	0.0
- undulated terrain	6	21	24.1

(11) Stadium area:

		Indoor working room:	
Fixed stadium area	yes	Timekeeping	yes
Fixed building	yes	Announcer	yes
Temporary stadium	no	Jury	yes
Temporary building	no	Race office	yes
Good infrastructure (access, parking, media, etc.)	yes		
Skitesting area along course/near stadium	yes		
Warm up track near the stadium	yes		

(12) Category for the stadium and course layout:

	Interval	Sprint	Skiathlon	Relay	Mass start
Stadium suitable for following competition formats	yes	yes		yes	yes
Course suitable for following competition formats with					
a) Classical technique	yes				yes
b) Free technique	yes				yes
Course suitable for relay and skiathlon competition					
a) On same course					
b) Combined on different courses (C+D or D+D)					

(13) Possibility of snow making:

Full length of course can be prepared by the snow making system, (75 hydrants - every 40-50 m) 15 snow guns, 2 tanks with a capacity of 1500 cubic meters each.

(14) Map Material:

Very good.

(15) Source of accurate elevation data:

GPS professional instrument

(16) Safety considerations:

No.

(17) General remarks:

Uphills are 9 m wide, undulated terrain 7.5 m, downhill 6 m wide.

Lighting along the entire net of courses (about 155 halogen lamps providing 30 - 35 Lux on the entire net of courses, and 4 multi-point reflectors on stadium, each 36m high, providing 1000 Lux at ground level on the stadium.

In general total length of 3km is covered with pavement surface, 4 m wide asphalt (on the curves of downhill sections and on the junctions - up to 7 m).

(18) Date of first inspection: 2019/7/5

(19) Date of final inspection: 2019/12/12

(20) Summary of terrain characteristics

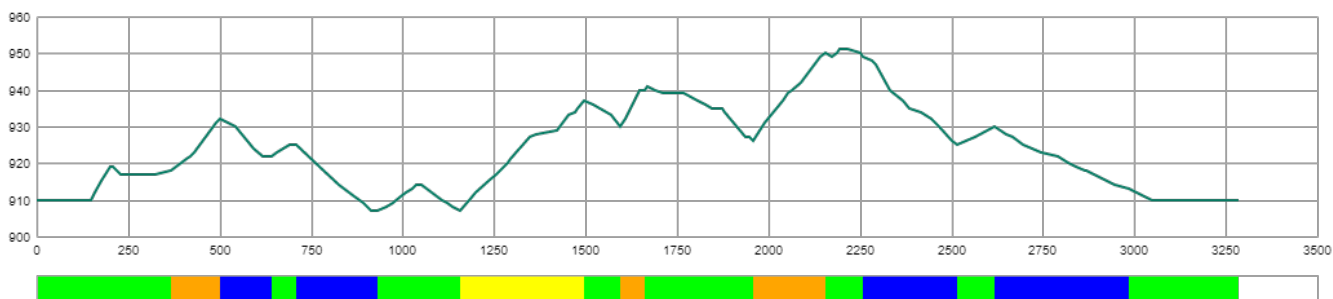
	#	at m	PHD (m)	PTC (m)	grad. (%)	avg. grad.(%)	
A-climb	■	total		0			0.0% part of TC
B-climb	■	1	366	14	14	6.9 - 13.4	10.4
		2	1,121	28	28	1.7 - 15.9	8.8
		3	1,524	24	24	6.8 - 15.1	12.1
		total		66			75.9%
C-climb	■	total		0			0.0% part of TC
undulated terrain	■	total		21			24.1% part of TC
		total climb		87			



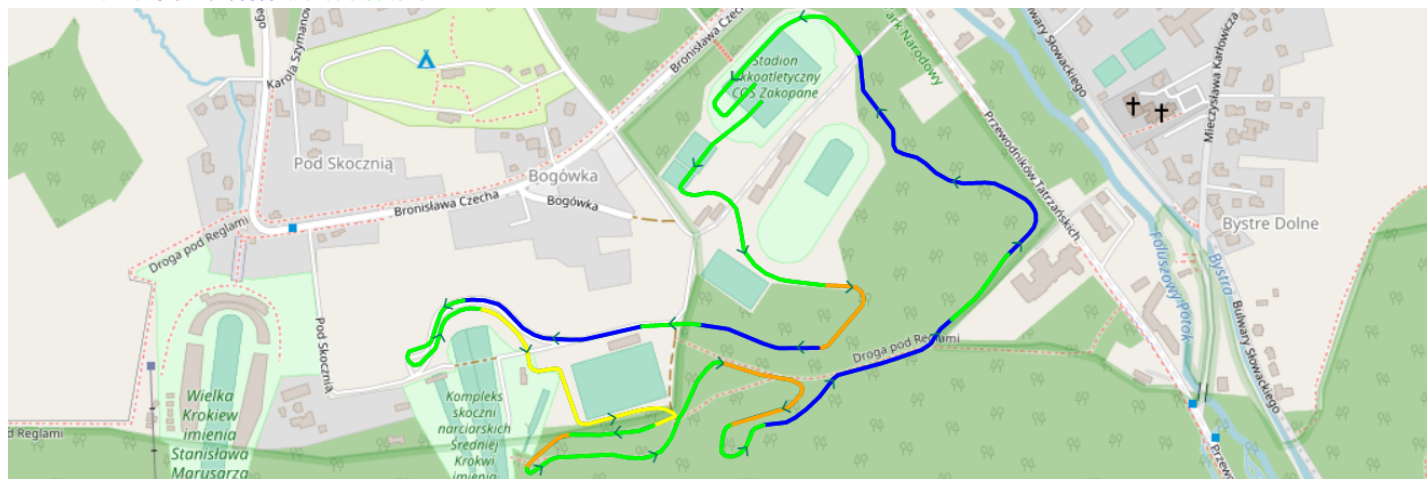
**CERTIFICATE
OF FIS HOMOLOGATED CROSS-COUNTRY COURSE
FIS CROSS-COUNTRY COMMITTEE**

(1) Registration number:	20/09.05/3.3
(2) Name of the competition site:	COS Zakopane
(3) Name of city/region:	Zakopane
(4) Organizer:	TZN, COS
(5) National ski association:	PZN
(6) Contact person in the organizing committee:	Sebastian Danikiewicz
(7) Homologation inspector:	Anna Guzik, Krzysztof Horecki
(8) Name of course:	3,3 km
(9) Competition level for course	COC

Course length:	3,283m	Height difference (HD):	44m	Lowest point:	907m
Course category:	D	Maximum climb (MC):	30m	Highest point:	951m
		Total climb (TC):	106m		



A-climb B-climb C-climb descent undulated terrain



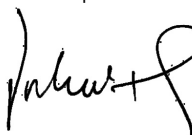
FIS Office


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FIS International Ski Federation
Blochstrasse 2 / Postfach
CH - 3653 Oberhofen

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Responsible


Vodrazka, Jakub

Date of Issue

24.01.2020
Valid until
30.06.2025

(10) Overview of the uphill:

	No.	PTC	% of TC
- major climbs	1	30	28.3
- shorter climbs	3	48	45.3
- descents	4	0	0.0
- undulated terrain	8	28	26.4

(11) Stadium area:

		Indoor working room:	
Fixed stadium area	yes	Timekeeping	yes
Fixed building	yes	Announcer	yes
Temporary stadium	no	Jury	yes
Temporary building	no	Race office	yes
Good infrastructure (access, parking, media, etc.)	yes		
Skitesting area along course/near stadium	yes		
Warm up track near the stadium	yes		

(12) Category for the stadium and course layout:

	Interval	Sprint	Skiathlon	Relay	Mass start
Stadium suitable for following competition formats	yes	yes		yes	yes
Course suitable for following competition formats with					
a) Classical technique	yes				yes
b) Free technique	yes				yes
Course suitable for relay and skiathlon competition					
a) On same course					
b) Combined on different courses (C+D or D+D)					

(13) Possibility of snow making:

Full length of course can be prepared by the snow making system, (75 hydrants - every 40-50 m) 15 snow guns, 2 tanks with a capacity of 1500 cubic meters each.

(14) Map Material:

Very good.

(15) Source of accurate elevation data:

GPS professional instrument

(16) Safety considerations:

No.

(17) General remarks:

Uphills are 9 m wide, undulated terrain 7.5 m, downhill 6 m wide.

Lighting along the entire net of courses (about 155 halogen lamps providing 30 - 35 Lux on the entire net of courses, and 4 multi-point reflectors on stadium, each 36m high, providing 1000 Lux at ground level on the stadium.

In general total length of 3km is covered with pavement surface, 4 m wide asphalt (on the curves of downhill sections and on the junctions - up to 7 m).

(18) Date of first inspection: 2019/7/5

(19) Date of final inspection: 2019/12/12

(20) Summary of terrain characteristics

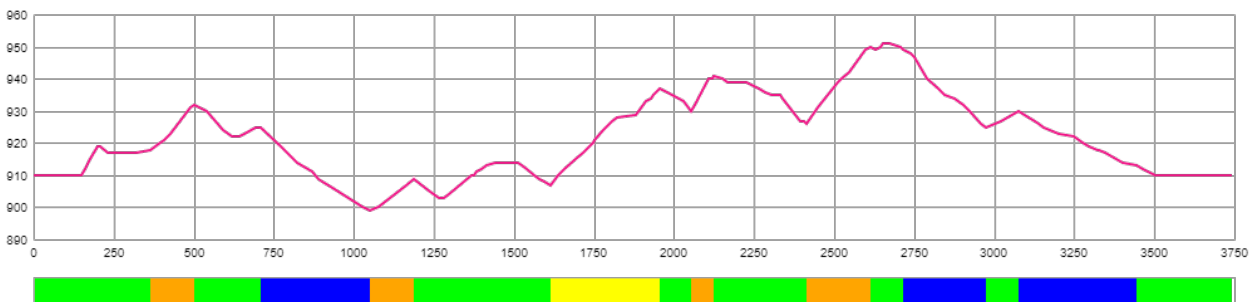
	#	at m	PHD (m)	PTC (m)	grad. (%)	avg. grad.(%)	
A-climb ■	1	1,156	30	30	1.7 - 14.1	8.8	
	total			30			28.3% part of TC
B-climb ■	1	366	14	14	6.9 - 13.4	10.4	
	2	1,594	10	10	0.0 - 19.7	14.9	
	3	1,956	24	24	6.8 - 15.1	12.1	
	total			48			45.3% part of TC
C-climb ■	total			0			0.0% part of TC
undulated terrain ■	total			28			26.4% part of TC
	total climb			106			



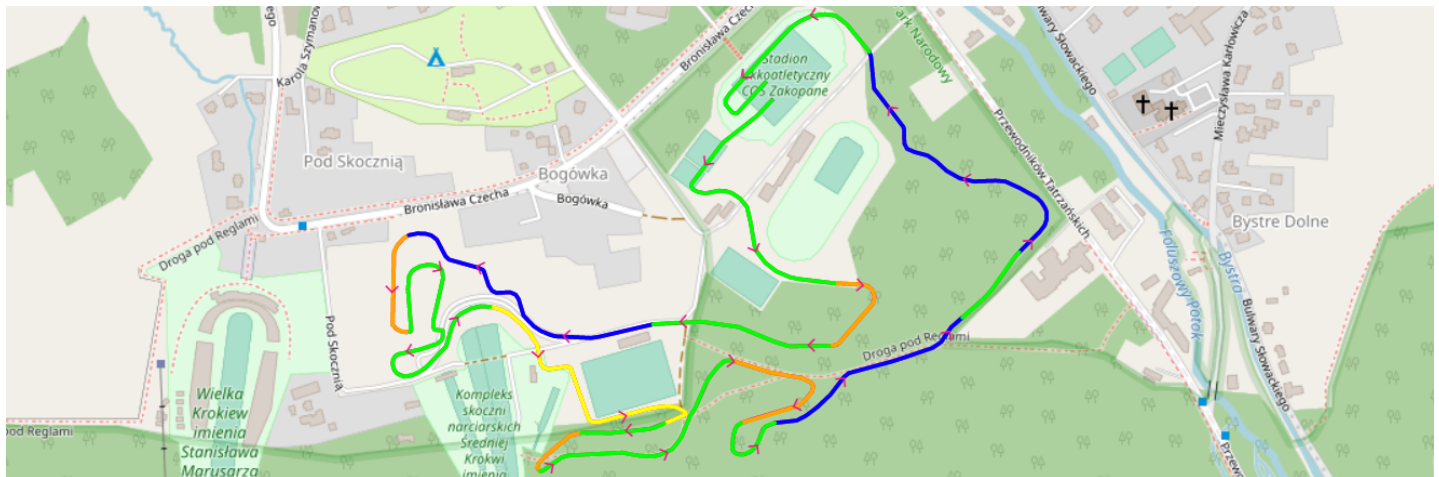
**CERTIFICATE
OF FIS HOMOLOGATED CROSS-COUNTRY COURSE
FIS CROSS-COUNTRY COMMITTEE**

(1) Registration number:	20/09.06/3.75
(2) Name of the competition site:	COS Zakopane
(3) Name of city/region:	Zakopane
(4) Organizer:	TZN, COS
(5) National ski association:	PZN
(6) Contact person in the organizing committee:	Sebastian Danikiewicz
(7) Homologation inspector:	Anna Guzik, Krzysztof Horecki
(8) Name of course:	3,75 km
(9) Competition level for course	COC

Course length:	3,742m	Height difference (HD):	52m	Lowest point:	899m
Course category:	D	Maximum climb (MC):	30m	Highest point:	951m
		Total climb (TC):	120m		



A-climb B-climb C-climb descent undulated terrain



FIS Office

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CH - 3653 Oberhofen

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Responsible

Vodrazka, Jakub

Date of Issue

24.01.2020

Valid until

30.06.2025

(10) Overview of the uphill:

	No.	PTC	% of TC
- major climbs	1	30	25.0
- shorter climbs	4	59	49.2
- descents	3	0	0.0
- undulated terrain	8	31	25.8

(11) Stadium area:

		Indoor working room:	
Fixed stadium area	yes	Timekeeping	yes
Fixed building	yes	Announcer	yes
Temporary stadium	no	Jury	yes
Temporary building	no	Race office	yes
Good infrastructure (access, parking, media, etc.)	yes		
Skitesting area along course/near stadium	yes		
Warm up track near the stadium	yes		

(12) Category for the stadium and course layout:

	Interval	Sprint	Skiathlon	Relay	Mass start
Stadium suitable for following competition formats	yes	yes		yes	yes
Course suitable for following competition formats with					
a) Classical technique	yes				yes
b) Free technique	yes				yes
Course suitable for relay and skiathlon competition					
a) On same course					
b) Combined on different courses (C+D or D+D)					

(13) Possibility of snow making:

Full length of course can be prepared by the snow making system, (75 hydrants - every 40-50 m) 15 snow guns, 2 tanks with a capacity of 1500 cubic meters each.

(14) Map Material:

Very good.

(15) Source of accurate elevation data:

GPS professional instrument

(16) Safety considerations:

No.

(17) General remarks:

Uphills are 9 m wide, undulated terrain 7.5 m, downhill 6 m wide.

Lighting along the entire net of courses (about 155 halogen lamps providing 30 - 35 Lux on the entire net of courses, and 4 multi-point reflectors on stadium, each 36m high, providing 1000 Lux at ground level on the stadium.

In general total length of 3km is covered with pavement surface, 4 m wide asphalt (on the curves of downhill sections and on the junctions - up to 7 m).

(18) Date of first inspection: 2019/7/5

(19) Date of final inspection: 2019/12/12

(20) Summary of terrain characteristics

	#	at m	PHD (m)	PTC (m)	grad. (%)	avg. grad.(%)	
A-climb ■	1	1,615	30	30	1.7 - 14.1	8.8	
	total			30			25.0% part of TC
B-climb ■	1	366	14	14	6.9 - 13.4	10.4	
	2	1,052	10	10	3.8 - 9.6	7.5	
	3	2,053	11	11	16.0 - 19.7	15.1	
	4	2,415	24	24	6.8 - 15.1	12.1	
	total			59			49.2% part of TC
C-climb ■	total			0			0.0% part of TC
undulated terrain ■	total			31			25.8% part of TC
	total climb			120			