

IIIrd EUROPEAN JURIDICAL FORUM ON SNOW

Circulation of mechanical means on ski slopes

- Juridical situation in Germany -

I. Introduction

Among accidents that can occur on ski slopes, collisions between skiers¹ and mechanical means are undoubtedly among the worst. Their dynamics are often as much spectacular as are dramatic the ensuing consequences – always exclusively – by the skier². A classical example, suitable in the evaluation of the juridical situation is the collision between a skier who, without a visual, crosses or jumps a ditch while a mechanical means is approaching from downstream.

The unattempted judiciary proceedings by the injured party for the purpose of compensation for damages or, in the case of the damaged party's death, by the respective relatives, are always extremely controversial and characterised by the dichotomy between the obligation of the operator of the mechanical means of guaranteeing the safety of circulation on the ski slopes and the personal responsibility of the skier³.

¹ In the following pages, the term "skier" stands for all those, whether male or female, who use ski slopes with appropriate authorised instruments (skis, snowboards, snowblades, snowbikes, etc.)

² Cf. The survey illustrated by Dambeck/Pichler in "Kollisionsunfälle mit Skipistengeräten - Haftung nach deutschem und österreichischem Recht" (*Collisions with mechanical means on ski slopes – Liability in accordance with the German and Austrian law*), SpuRt 1996, 6 and by Dambeck in "Der Pistenraupenunfall - Kasko statt Eigenverantwortlichkeit" (*Accidents with mechanical means – comprehensive insurance instead of personal liability*), SpuRt 1999, 138 (SpuRt = sports and juridical review, publishers C.H. Beck Munich(Bavaria)/Frankfurt

³ Concerning the dichotomy between personal liability and the obligation of guaranteeing safety of circulation on ski slopes, see my report on the occasion of the 2nd EUROPEAN JURIDICAL FORUM ON SNOW

The normative framework in force in Germany for the circulation of motorised means on ski slopes (snowmobiles and snowcats) is illustrated below.

II. Snowcats

The official denomination of snowcat is: snowgrooming vehicle⁴. Today snowgrooming of ski slopes is considered one of the compulsory tasks that the manager of the skiing area assumes by drawing up the transport contract⁵ with the skier.

The circulation of snowcats is based by a series of juridical assumptions.

Similarly as for vehicles circulating on roads, the principle according to which their circulation needs an official permit is valid also for the mechanical means used on ski slopes. Bavaria (which, seen its geographical position, is the German region with the greatest crowd of skiers) has established a standard / special⁶ juridical relation. A special permit is issued only in the presence of strict conditions with respect to **circulation safety**⁷ and to **noise pollution and environment control**⁸.

⁴ German standard DIN 30770 of 1 April 2001 ("snowgrooming vehicles – safety criteria"): a snowgrooming vehicle is a self-moving machine on trucks, intended mainly for the snowgrooming of snow. It may also be used as a transportation means and can be used for landscaping improvement activities.

⁵ The transportation contract foresees, as main performance obligation, the transportation of the skier from the downstream station to the upstream station. Maintenance of ski slopes, safety measures of circulation, etc., are included in the so-called accessory performance obligations.

⁶ In accordance with article 12 *capo verso* 2 of the Bavarian Law on control of emissions (BayImSchG), for circulation safety reasons and protection of acoustic and environmental pollution, the mechanical means require a special authorisation. The related details are regulated by the joint communication by the state Ministry for territorial development and environmental matters and by the Ministry of the Interior of 30 November 1984 on the subject of "Mechanical means and safety on ski slopes and skiing paths (MABI. 1985 page 2).

⁷ In the framework of the procedure for authorisation it must be ascertained, with reference to each single case, whether the safety of skiers on descending ski slopes and skiing paths (cross-county skiing slopes) may be considered as risky. The relative information inferred from this procedure, find expression on the list of conditions.

Such conditions assume, in the first place, the very precise and specific joint presence of assumptions that authorise the snowgrooming of the ski slopes as well as circulation of mechanical means for providing supplies or other purposes.

In general, circulation of snowgrooming vehicles during opening hours of the ski slopes **is not prohibited**, since certain circumstances do not allow postponements (elimination of actual dangerous situations, recovery of the wounded, etc.). Among conditions, however, it is always made clear of **possibly** limiting the use of mechanical means in hours when the crowding of the ski slopes is reduced and visibility conditions are good.

1. A not atypical hazard

It is a unanimous opinion that a snowgrooming vehicle (except in the case of snowgrooming with winches and/or frontal cutter - cf. below) does not represent an atypical hazard for the skier, not even during opening hours of the ski slopes. In fact, it makes part of the daily reality of the ski slopes. The skier must therefore consider the possibility of running into, everywhere and at any moment, a snowgrooming vehicle going upstream, even if the latter should crop up suddenly from a depression or a cat's back. In virtue of his responsibility, the skier is bound to observe the signalling system⁹ posted in all strategic points (downstream and upstream stations, bottlenecks and blind passages on ski slopes), as well as other safety measures adopted by the ski slope

⁸ Regulation in accordance with the German Federal Law on the control of emissions ("Geräte- und Maschinenlärmschutzverordnung - 32. BimSchV" of 29 August 2002, last modification on 6 March 2007).

⁹ DIN 32912 (graphic symbols and information boards for skiers on ski slopes) - No. 6 (graphic symbol of a snowgrooming vehicle + text: "Attention: snowgrooming vehicles in circulation!").

manager (FIS rule No. 8), adapting his pace to the visibility conditions, as written on the 2nd FIS rule. By so doing, he is able to stop or avoid promptly the vehicle in any situation. In Germany, in addition to the FIS rules, also the advices of the DSV on the behaviour in relation to snowgrooming vehicles¹⁰ are in force. These advices, together with the above mentioned FIS regulation, represent the **diligence criteria** on the basis of which is subsequently evaluated the personal liability of the skier injured following a collision with a snowgrooming vehicle, with the possible consequence that part, or all, the claimed compensations for damages - even moral – are rejected.

2. Source of hazard *sui generis*

If used during opening hours of the ski slopes, however, the snowcat represents a **highly obstructive disturbing factor**. Often, it circulates in the opposite direction to the flow of skiers heading downstream, it is not subject to any obligation of direction and, because of the conformation of the ground its presence is usually perceived only too late. The driver's visual is limited; manoeuvres and bends require much space. Notwithstanding the proportionally reduced speed, the inertia and the ground complicate almost always applying the breaks. These factors determine that the vehicle is classified as source of hazard *sui generis*. From the juridical point of view it results that, although it does not concern an atypical hazard, the manager is bound to adopt safety measures that place, in a **correspondent** measure, the personal liability of the skier. Seen the potential risk totally unequal between the skier and

¹⁰ In German skiing areas, in general the DSV advices on the behaviour in relation of snowgrooming vehicles are exhibited on special boards; the DSV advices are available also at this address www.ski-online.de

the snowcat, these measures have as a primary aim that of maximising the degree of safety on the ski slopes.

3. The safety measures in detail

3.1 According to principle “*neminem laedere*”, in case of important reasons or that have nothing to do with the scope of the vehicle (for example, comfort or only supplying tasks) use of the snowcat must be postponed until closing time of the ski slope. First of all, it must be evaluated, therefore, if the foreseen use justifies the greater risk caused to the skiers (**important or useless use?**).

3.2 Should the use of the vehicle be justified, it must be evaluated whether it is necessary **closing** (partially) the involved sectors of the ski slope, temporarily preventing skiers descending along these stretches. This is valid, for example, if

- in a narrow passage it is not possible, even for a careful skier, to run into a snowgrooming vehicle without incurring into any hazard, and
- the passage is so lengthy that one signalling board alone is not sufficient any longer.

3.3 If it should it be decided to use the vehicle without closing down the ski slopes, concrete safety measures must be adopted. These depend from time to time by the **morphological conditions of the ground** and from **visibility**, and can be, for example:

- choice of the possibly less hazardous path for the skiers;
- switching on of the headlights and alarm signals (optical and acoustical) of the vehicle;
- in case of scarce visibility (blind passages, bottlenecks, sleet, fog, etc.): boards, traffic direction banners, barriers;

- signalling system (with the double function of stopping or deviating skiers and obliging the vehicle's driver to stop until he can proceed without causing any hazard);
- fixed blinking lights by radio activation.

4. Other vehicles

4.1 Snowgrooming vehicles with winches

During snowgrooming of the ski slopes with a winch, the snowcat moves to the lower end of a steel cable which during vertical movements can unwind for 1,000 m. and over by means of a winch installed on the vehicle. At the upper end, the cable is fixed to the ground by which it assists the horizontal movements of the machine. During this operation, the cable can, from one hand, result "invisible" under snow, and on the other hand, fling itself laterally and towards the top as a whip. Whenever a skier should find himself in this type of situation, the consequent **death hazard** would undoubtedly be atypical. In this case, the skiing area manager has the absolute obligation of guaranteeing the safety of circulation on the ski slopes, something that may involve the following consequences:

Snowgrooming with winches is allowed only if there is the certainty that the skiers cannot be involved, that is to say

- **in the case of an open ski slope:**

In the case of an open ski slope, and therefore in the presence of skiers, snowgrooming by winches is allowed **only subject to closure** of the involved stretches. In such a

case, appropriate **signals** must be placed in appropriate points indicating clearly

1. **why** and **where** the ski slope has been closed
2. presence of **death hazard**

Example:

Slope 3 is closed!
Snowgrooming with winch in progress!
Death hazard!

The hazard boards signalling snowgrooming with the winch must be positioned wherever they **have greater probability** of being seen by skiers, therefore not only at the downstream and upstream stations, but also on panoramic banners, in mountain huts adjacent to the ski slopes and at strategic points (for example where skiers, after a break in a mountain hut, generally enter the slope laterally).

- **after closure of the ski slope:**

Skiers have the right to safety of circulation on ski slopes until the latter are open. After their closure, the manager may substantially suppose that his clients have left the slopes and that therefore they will not be involved in the snowgrooming of the slope with a winch. To justify such a supposition, however, the manager must have indicated clearly the time of closing of the ski slope. In other words, the time of the last ascent and that of the last control journey (final control) must be indicated at least on the boards of the downstream and upstream stations. This is a guarantee that all the skiers have

left the skiing area. At this point, the slope is intended closed and the obligation of guaranteeing safety of circulation ends (temporarily, until the opening of the ski slope on the following day).

Together with the communication of the last control journey, it is advisable signalling the risks connected to the subsequent snowgrooming with the winch.

Two categories of skiers, however, are exempted from this system:

4.1.1 the day clients who, **at the moment of closure**, stay **outside the ski slope** (for example in a restaurant or a mountain hut) and descend downstream only later. In this case, whoever has the obligation of guaranteeing safety of circulation on the ski slopes may presume that, in the course of the day, these persons have read the closing hours and the notices, and therefore they know exactly that, during those hours, they cross a risk area exclusively under their responsibility.

4.1.2 the **Alpine skiers**, who ascend along the ski slopes **after their closing**, for then descending downstream at another moment¹¹. Also in this case is valid the consideration according to which these users practice skiing exclusively at their own risk and peril. In this case, however, the ski slope managers keep into consideration the fact that the Alpine skiers' behaviour is known to them. Consider the circumstances of hazard that are created on the ski slope

¹¹ or also excursionists that initially were out of the ski slope and wish to use the snowgroomed slopes for the last stretch of descent.

during the course of snowgrooming by winch; they commit themselves personally to contribute in the support of safety. In other words, they take steps in providing and placing the above mentioned signalling system in important strategic points for the Alpine skiers (car parking, mountain huts frequently visited, lateral entries regularly used for accessing the ski slopes, etc.). With this hazard signalling system those who are bound to guarantee safety of circulation on ski slopes have done everything in their power to “update” the personal responsibility of the Alpine skiers.

4.2 Frontal Cutters / Turbine Snow Ploughs

Today ski slopes are often snowgroomed by frontal cutters and turbine snow ploughs. To the eyes of an attentive skier, the snow jet visible at a great distance does not represent an atypical hazard. On the contrary, this is the case of the frontal cutter, open on its frontal part, since the consequences of a possible collision may result decidedly more serious for the skier, due to the high rotational speed of the roller. For this reason during the use of such means the same safety criteria adopted in case of snowgrooming with winches are applied.

5. Official closing

Bavaria foresees that, in determined circumstances, the ski slopes may be **closed officially** for safety reasons and transgressors are penalised with a money penalty¹². In virtue of such juridical approach, therefore, there subsists the possibility of closing substantially a slope at the closure of plants, but to authorise access to the Alpine skiers, subject to

¹² Art. 24 *capo verso* 2, page 1, *capo verso*. 6 No. 1 Bayerisches Landesstraf- und Verordnungsgesetz (BayLStVG).

an appropriate notification, in determined moments (hours or days). The advantage of this temporal structuring is, in the first place, the greater clarity for both categories of users with respect to the hazard situation during snowgrooming of the ski slopes.

6. Lighting

The alarm signals and the hazard boards are efficient only if they can be perceived by an attentive skier or an Alpine skier also in the case of scarce visibility (fog/sleet, darkness). Therefore, should it be necessary to light them up with direct light or equip them with an obvious lighting signal (blinker, rotating beacon), which allows approaching with caution and subsequently read the information contained on it.

7. Deactivation/elimination of the alarm signals

Another aspect to be considered for guaranteeing the effectiveness of the hazard signals is their up-to-dateness. Whoever is subject to the obligation of guaranteeing circulation safety on the ski slopes does not relieve himself from his liabilities by keeping permanently affixed or in operation (for convenience) the hazard signals. It is well known that - in case of constant operation – the effect of the signalling system “wears off” rapidly. Therefore, once the use of the mechanical means ends the person in charge must deactivate the alarm signals as soon as possible.

III. Snowmobiles

Even snowmobiles have now become a daily presence on the ski slopes. The responsible skier must always¹³ consider the possibility of running into them, at times even more so than into snowcats¹⁴.

Generally, circulation of snowmobiles is prohibited, but it can be allowed subject to an issue of a special official authorisation (under certain determined conditions)¹⁵.

The hazard deriving from such vehicles is not less than that generated by the snowgrooming vehicles, but is determined by other factors. In fact, snowmobiles are much faster and manoeuvrable and therefore are perceivable only too late, and at times suddenly, even by an attentive skier. In addition, their trajectory is difficult to be calculated. In any case, compared to the snowcats their potential risk is relative, seen the possibilities distinctly better for breaking and avoiding collisions. As a whole, however, it can be asserted that, **in determined situations, snowmobiles generate an atypical hazard.**

Those who are subject to guaranteeing safety of circulation on ski slopes are therefore liable to respect certain diligence criteria. In the first place, also in this case it must be evaluated whether their use is so urgent that

¹³ Signalling system in downstream/upstream stations, on panoramic boards, etc., in compliance with footnote No. 9: "Attention: snowgrooming vehicles in circulation!").

¹⁴ In addition to the usual forms of use of the snowcats for snowgrooming of ski slopes (on a wide scale), supplies, transport and rescue of persons, snowmobiles are also used for the maintenance of the slopes, even though on a lesser scale, for repairing technical plants, feed the game, etc. The determination criteria for their use are, on one hand, the possibility of reaching destination, in consideration of the morphological structure of the territory, and, on the other hand, the costs.

¹⁵ As far as the juridical situation is concerned, cf. by way of example the Bavarian regulations mentioned in footnotes No. 5 and 6.

it cannot be postponed to the closing hours of the ski slopes (**important or useless use?**).

- **In the case of an open ski slope:**

if use of snowmobiles is necessary during opening hours of ski slopes, it is required to observe the following rules:

- proceed possibly outside the slope
- if it is necessary to proceed inside the slope,
 - a) keep possibly at the edge of the slope or proceed on well visible stretches
 - b) proceed at a suitable speed (as slowly as possible in narrow points and with scarce visibility)
- if at a blind point the passage is narrow and/or, due to a steep slope, it can be covered at a moderate speed, it must be closed as soon as possible and eventually supervised by the personnel
- optimise constantly the visibility of the mechanical means (headlights, acoustical and visual signals, signalling flag on a long pole, etc.).

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