INTERNATIONAL STANDARD

ISO 28499-1

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Buffalo hides and buffalo calf skins —

Part 1: Description of defects

Peaux de bovinés —

Partie 1: Description des défauts

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Foreword

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ISO 28499-1 was prepared by Technical Committee ISO/TC 120, *Leather*, Subcommittee SC 1, *Raw hides and skins, including pickled pelts*.

ISO 28499 consists of the following parts, under the general title *Buffalo hides and buffalo calf skins*:

— *Part 1: Description of defects*

— *Part 2: Grading on the basis of mass and size*

— *Part 3: Grading on the basis of defects*

Buffalo hides and buffalo calf skins —

Part 1:
Description of defects

1 Scope

This part of ISO 28499 describes the defects which can occur on buffalo hides and buffalo calf skins intended for tanning.

It applies to water-buffalo hides and water-buffalo calf skins and not to those of wild buffalo and American bison (*Bison bison*).

2 Terms relating to defects

The defects on buffalo hides and buffalo calf skins referred to in this part of ISO 28499 are divided into three categories:

— ante-mortem defects;

— post-mortem defects;

— preservation defects.

3 Causes and types of ante-mortem defects

3.1 Blind warble hole

This is a hole caused by the warble larva (*Hypoderma bovis, Hypoderma lineatum*) in the calf skin of the living animal. The scar formed as the result of a warble hole having healed is known as a healed warble hole.

3.2 Brand mark

This is a man-made mark on buffalo hides and calf skins, generally used for identification and made with either a hot or cooled iron or chemical products.

3.3 Bruises

Bruises are lesions or injuries on the animal which occur mainly on the hip and shoulder areas of the hide.

3.4 Dung damage

Dung causes damage to the hide by provoking an irritation resulting in coarsening of the grain. Dung also causes staining on hides.

3.5 Gangrene

When an area of animal hide becomes necrotic or modified, the condition is known as gangrene. This can be due to microbiological, mechanical or chemical causes.

3.6 Goad mark

The use of goading sticks on buffalo can affect the quality of their hides. Patches containing prick holes are found on many hides on the buttocks. Some goad marks are considerably larger than a prick hole.

3.7 Horn mark

A horn mark is damage to the grain caused by animal horns.

3.8 Horn rakes

Horn rakes are damage to the grain caused by the horns of the animals during fighting.

3.9 Hump sore

Hump sore is a disease in cattle caused by the nematode *stephanofilaria assamensis* and results in the formation of scab and crusts, hair loosening and thickening of the hide. The lesion spreads in the hump region.

3.10 Lice

Due to the irritation caused by biting or sucking types of lice, the animals scratch the affected parts of the body, leading to wounds and bruises.

3.11 Pox mark

Pox marks are hard, circular, lesion-based defects leaving scar marks on the grain and at times are even found to be penetrating the full thickness of the hides.

3.12 Ringworm

This is a disease caused by fungal species in buffalo. The lesions appear as raised, round, crusty patches.

3.13 Surra

Surra is a disease caused by protozoa, which are present in the blood and are transmitted from one animal to another by gadfly. There are no characteristic lesions associated with surra but the hide becomes noticeably thin and light in weight.

3.14 Tick mark

Ticks affect the quality of hide and calf skin to a considerable extent. Ticks leave scar marks or open damage on the grain side of the hide.

3.15 Urine damage

Urine causes damage to the hide by provoking an irritation resulting in coarsening of the grain. Urine also causes a change in colouration of the hair in hides and calf skin.

3.16 Yoke mark

This is a patch of hardened skin on the neck caused by the pressure and rubbing of the hide against the yoke.

4 Causes and types of post-mortem defects

4.1 Badly bled skin

Inadequate bleeding of the animal at the time of slaughter results in coagulated blood remaining in blood-vessels, visible on the flesh side of the calf skin. This defect particularly concerns calf skin.

4.2 Corduroying

Corduroying is poor flaying of the hide or calf skin, shown as a series of shallow and generally parallel streaks.

4.3 Cut throat

A large incision mark is made perpendicular to the throat during flaying of hides. Because of this, the entire hide cannot be fully utilized as the head area is to be trimmed out to avoid processing difficulties.

4.4 Excess flesh

Hides obtained from fallen animals contain excess flesh and an adipose tissue layer.

4.5 Flay cut

A flay cut is produced on the hide or calf skin by a knife or a flaying appliance, cutting into the dermis or skin substance without there being any actual perforation.

4.6 Gouge

A gouge is thinning of the hide or calf skin caused by a knife, a flaying appliance or a fleshing machine without there being any actual perforation.

4.7 Grain break (grain burst)

A grain break involves tears made on the grain side of the hide or calf skin during flaying.

4.8 Hole

A hole is a complete perforation of the hide, or calf skin, caused by either a knife, a flaying appliance or a fleshing machine.

4.9 Poor pattern

The symmetry of the hide on both sides of the backbone adds to its value. Depending on the ripping cuts in the belly and in the legs, the shape of the hide may be non-uniform and look bad and the final trimmed area of leather may be reduced.

4.10 Scores

Scores are knife cuts which do not go half-way through the hide but are deep enough to cause damage to the finished leather.

5 Causes and types of preservation defects

5.1 Hair slip

Putrefaction of part of the hide or calf skin is revealed by a premature loosening of the hair.

5.2 Pitting

A defect caused by extra-large-sized salt crystals or non-salt particles is the pitting of hides which persists in the leather.

5.3 Purple discolouration

Discoloured areas, ranging from purple to very deep blue or violet or even black, result from a deterioration of subcutaneous and dermal tissues.

5.4 Red heat

Red heat indicates discoloured areas, varying from pink to brick red, due to bacteriological effects and generally indicating a deterioration of the hide or calf skin.

5.5 Salt spots

A salt spot is a small area of salted stain, white or light brown in colour.

5.6 Salt stain

This defect develops on wet salted hides on the flesh, grain or in the middle of the corium. Curing salt containing calcium, mostly as calcium sulfate, is responsible for salt stain.

5.7 Salt stippen

Precipitates of magnesium salts, in the form of star-shaped crystals, resulting in damage to hide are called salt stippen. These are visible only after liming.

5.8 Sun blisters

Flint-dried hides may produce sun blisters due to rapid drying of the surfaces causing holes or hide separation which become apparent after liming.

5.9 Veininess

The appearance of prominent blood vessels or vein-like protuberances occurring on the grain surface of finished leather is known as veiny grain leather. The real cause of veininess is not known. However, it is generally recognized that improper bleeding of the animal, delay in curing, inadequate curing, under-soaking, etc. might be responsible for veininess.