



## TECHNICAL REPORT 5046

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

### Continuous mechanical handling equipment — Safety code for conveyors and elevators with chain-elements — Examples for guarding of nip points

*Engins de manutention continue — Code de sécurité des appareils à chaînes — Exemples de protection des points d'engrènement*

Technical Report 5046 was drawn up by Technical Committee ISO/TC 101, *Continuous mechanical handling equipment*, and approved by the majority of its members. The reasons which led to the publication of this document in the form of a Technical Report are the following :

The aim of this Technical Report is to give examples for the guarding of nip points between the chains and the sprocket wheels or caterpillar drives for all conveyors and elevators using chains as transporting elements.

This Technical Report incorporates sketches which show in principle how sufficient safety can be achieved, without excluding other methods which give the same safety factor. As this is a subject that cannot be considered as suitable for an International Standard, it was decided to publish the document as a Technical Report.

#### 1 SCOPE AND FIELD OF APPLICATION

This Technical Report describes different safety devices at nip points for conveyors and elevators with chain-elements. It supplements the various International Standards dealing with safety of continuous mechanical handling equipment.

#### 2 REFERENCE

ISO 1819, *Continuous mechanical handling equipment — Safety code — General rules*.<sup>1)</sup>

<sup>1)</sup> At present at the stage of draft. (Revision of ISO/R 1819-1970.)

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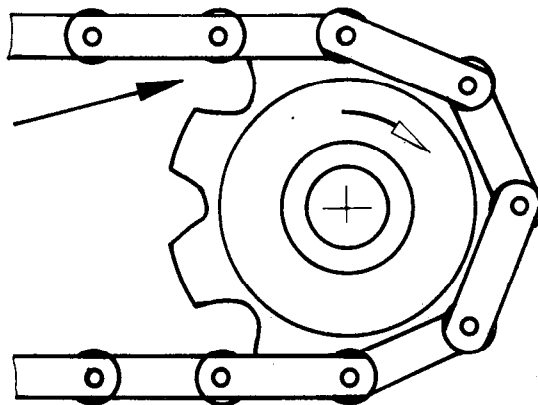
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**Descriptors :** handling equipment, continuous handling, conveyors, chain conveyors, elevators, safety equipment, nip points.

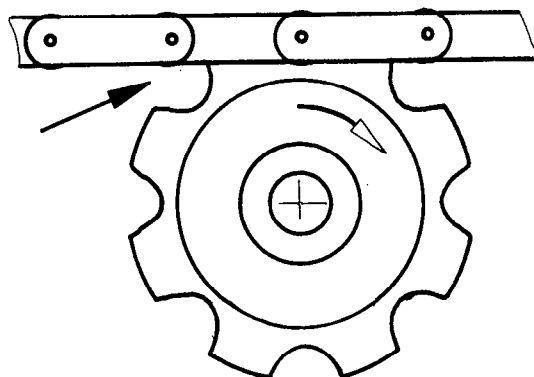
### 3 NIP POINTS ON CHAIN CONVEYORS

There is a risk of accidents occurring where chains run on to sprocket wheels or guide wheels.

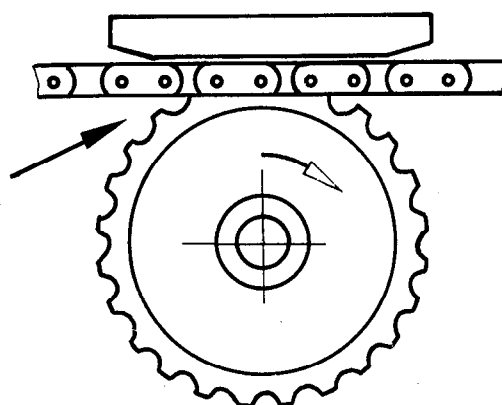
#### 3.1 When the chains run round sprockets.



#### 3.2 When the chain is supported by a sprocket.



#### 3.3 When a shoe above the chain precludes any possibility of the chain lifting.



 points to be protected  
 direction of travel