

## Insurance & Reinsurance - Canada

### Insurance Policy Exclusions for Loss Occasioned by 'Faulty or Improper Design'

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#### Introduction

A recent Supreme Court judgment has clarified the standard that is necessary for the 'faulty or improper design' insurance exclusion to apply. Typically, this exclusion will relieve an insurer from providing indemnity for a loss resulting from design problems that led to the claim. This judgment has profound implications for all insurers and insureds whose policies include this sort of exclusion.

In *Canadian National Railway v Royal and Sun Alliance Insurance Co of Canada* the Supreme Court addressed the issue of 'faulty or improper design' in an insurance contract. Prior to *Canadian National Railway*, some authorities suggested that a design was faulty if it did not work for its intended purpose, while others suggested that a faulty design was one that could not cope with all foreseeable risks. In *Canadian National Railway* the Supreme Court rejected both of these approaches and paved its own way.

#### Facts

Canadian National Railway sought to build a railway tunnel under the St Clair River between Sarnia, Ontario and Port Huron, Michigan. This required the construction of a large tunnel boring machine almost 10 metres in diameter and 83 metres in length. In order to keep rock and dirt contaminants out of the mechanism that drove the tunnel boring machine forward, a complicated system of 26 seals was used. It was believed that the tunnel boring machine would be stopped only if all 26 seals failed, but that the redundancy built into the system would make this failure very unlikely. However, approximately 14% of the way into the project, dirt was found to have bypassed the elaborate seal system and to have entered the main bearing chamber. During design, the engineers appreciated that if differential deflection between key components exceeded  $\pm 3$  millimetres (mm), dirt could penetrate and bypass the seals. Based on detailed computer analysis of the design, the engineers were satisfied that differential deflection could be kept within the  $\pm 3$  mm range. In operation, this proved not to be the case. Consequently, the project had to be paused, modifications had to be made to the boring machine and the project subsequently restarted. Construction was delayed by 229 days, at a total cost of approximately C\$30 million.

Canadian National Railway sought indemnification for this cost from its insurers under its all-risks insurance policy. The insurers rejected the claim, relying on an exclusion to the insurance policy that provided, in part, that the insurance policy did not insure the cost of making good 'faulty or improper design'.

#### Decision

The key question for the court to address was whether the failure of the design to withstand the foreseeable and indeed foreseen risk that differential deflection could exceed  $\pm 3$  mm was itself sufficient to establish that the design was 'faulty or improper'.

Before reaching the Supreme Court, the lower courts were split. The Ontario Superior Court found that even though there was a failure, the design accommodated all foreseeable risks, given the state of engineering knowledge at the time, and therefore the exclusion did not apply. The Ontario Court of Appeal found that the exclusion did apply as the design failed to prevent excessive differential deflection, thus leading to dirt bypassing the seals. Consequently, the delay in construction was a direct result of this faulty design.

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The majority of the Supreme Court found that an engineering design cannot be said to be faulty if it conforms to the state-of-the-art standard, and that a simple failure does not discharge the onus of establishing a 'faulty or improper design' (ie, the court found that failure alone was not sufficient evidence of inadequate design). An insurer is entitled to the benefit of an exemption such as the exclusion "unless the design met the very highest of standards of the day and failure occurred simply because engineering knowledge was inadequate to the task at hand". The majority stated quite clearly that where the risk is broadly defined and the design addresses that risk with state-of-the-art diligence and expertise, an insurer is not entitled to benefit from the exclusion simply because the state of the art falls short of perfection and omniscience.

For the majority, 'faulty or improper design' in the exclusion requires a failure of the design process to exploit fully the state of the art. That is, if the design is 'faulty' in the sense that it was unable to withstand the conditions in which it was employed (as in *Canadian National Railway*), but it was the best design that was possible in light of the then existing state of the art, the insurer may not benefit from the exclusion.

## Comment

While the decision in *Canadian National Railway* marked a win for the insureds in the specific case, it should also be seen as a win for the broader insurance industry. While the Supreme Court clearly stated that a standard of omniscient perfection is too high a standard, it determined that the state-of-the-art standard is the appropriate standard, as opposed to a lesser standard such as 'industry practice'. Insurers seeking to rely on a 'faulty or improper design' exclusion must show that existing scientific or technical knowledge could have predicted the risk of damage and provided a design that would have avoided the problem. Future insureds claiming under insurance policies that have 'faulty or improper design' exclusions will be required to demonstrate that their design met the state-of-the-art standard. The problem that insurers will face will be proving that innovative and novel equipment is not state of the art, particularly when technology is proprietary or it is otherwise difficult to locate witnesses willing and able to testify that a design is not state of the art.

However, in practical terms, policies with a 'faulty or improper design' exclusion, as in *Canadian National Railway*, will be appropriate only for unique, high-priced goods. Some products occupy a segment of the market that is intentionally of lower quality and lower price and therefore more accessible to a wider range of consumers; however, producers of these goods may still desire liability coverage. A policy with a 'faulty or improper design' exclusion, in light of *Canadian National Railway*, would provide no protection with respect to such goods and producers should therefore consider saving the cost of their premium, unless the exclusion is redrafted.

Further, even some unique goods, such as manufacturing plants, are intentionally designed and built to a standard that is lower than the state-of-the-art standard and more reflective of a standard that is cost effective under the circumstances. In light of the Supreme Court's holding that a design below the state-of-the-art standard would not be covered by a policy with a 'faulty or improper design' exclusion, such owners are again left with the choice of saving the premium or negotiating a more appropriate policy. Insurance is a contract for the reallocation of risk. A 'faulty or improper design' exclusion allocates to the insurer only the risk that, despite the best efforts of the designer to eliminate all risk, some risk may remain. If the design is intended to avoid eliminating all possible risk, on the basis that the cost of eliminating the residual risk is not considered to be worth the cost, then a policy which accepts this additional risk is essential and a policy with a 'faulty or improper design' exclusion is a waste of money. If the premium for a policy which assumes the additional risk is prohibitive, then the designer's evaluation of the risk must be considered.

With this new Supreme Court guidance, insurers and policyholders are advised to:

- review their general insurance policies, paying particular attention to the wording of any exclusions, specifically those relating to 'faulty or improper' design or use;
- ensure to the greatest possible extent that their design of products approaches the state-of-the-art standard and that they have the documentary record necessary to demonstrate that this is so;
- discuss with their legal counsel, insurance broker and insurer ways to bring their practice up to the state-of-the-art standard; and
- consult with legal counsel when reviewing existing insurance policies or considering entering into new policies that may have exclusions for 'faulty or improper design'.

For further information on this topic please contact [Hartley Lefton](#) or [Peter Wells](#) at Lang Michener LLP by telephone (+1 416 360 8600) or by fax (+1 416 365 1719) or by email ([hlefton@langmichener.ca](mailto:hlefton@langmichener.ca) or [pwells@langmichener.ca](mailto:pwells@langmichener.ca)).

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