IS 19321 : 2025 NavIC Receiver — Specification

Navigation with Indian Constellation (NavIC) is India's indigenous satellite navigation system, developed and maintained to provide accurate positioning, navigation, and timing services. In a typical application utilizing NavIC, a compatible navigation receiver captures signals from the satellites through an antenna and processes them to determine the user's position, velocity, and time (PVT). This computed PVT data is then used by the application software to deliver various value-added services, such as displaying the latitude, longitude, and altitude, mapping the position in real time, enabling geo-fencing, and synchronizing clocks for precise timekeeping. NavIC's independent operation ensures reliable and accurate navigation, particularly benefiting sectors like transportation, disaster management, and geospatial applications.

The product parameters remain the same across different applications for most NavIC receivers. However, parameters like receiver sensitivity, dimensions, power source (battery life), output refresh rate, receiver dynamics, external assistance sources, jamming resistance, etc. may vary from application to application. This standard is targeted at the performance of the NavIC receiver under various conditions and not on the application software that provides the value-added services.

This Indian Standard provides generic performance requirements and corresponding test cases for the NavIC receivers. These requirements would assist in ensuring the compatibility of NavIC receiver with NavIC constellation.

IS 19339 : 2025 Numerical Modelling in Rock Engineering — Guidelines

Numerical modelling is the process of using mathematical equations and computer algorithms to simulate the physical phenomena of rock mechanics and rock engineering. It involves creating a numerical representation of the rock mass, applying boundary conditions and loading scenarios, and solving the equations to obtain the outputs of interest, such as stress, displacement, failure, or fluid flow. Numerical modelling can be done at different scales, from micro to macro, and with different levels of complexity, from linear to nonlinear.

Numerical modelling can provide invaluable insights into rock mechanics problems that are difficult to observe or measure directly. For instance, you can use it to evaluate the stability of underground openings, slopes, pillars, or stopes; assess the impact of mining-induced seismicity, blasting, or subsidence; optimize the layout, sequence of excavation, and timing of mining operations; improve the design and performance of rock support systems; investigate the interaction between rock and fluid such as groundwater or gas; and enhance the recovery and extraction of minerals or energy resources.

With the development of comprehensive tools for numerical modelling and analysis in rock mechanics and rock engineering, its uses are also becoming very popular. Almost all the project reports for the design of tunnels and other underground openings, slopes, etc, are now a day, use numerical analysis in some or the other ways. With time and development of more comprehensive numerical modelling tools and computation techniques, its uses are bound to increase.

Numerical modelling, therefore, is an important instrument in rock engineering, which assists in the design and prediction of failure in rock masses. Dependable results can be obtained from the models if the underlying assumptions, capabilities, and limitations of the model are known.

This standard provides guidelines for the use of numerical modelling in analysis and highlights key considerations to be addressed during the modelling process. These aspects shall also be appropriately documented in project reports involving numerical modelling and analysis.

IS/ISO 14017 : 2022 Environmental Management — Requirements with Guidance for Verification and Validation of Water Statements

Water is necessary for all ecosystems. In water-stressed countries/regions, during droughts and in areas where water resources are scarce, it is extremely important to ensure access to water supplies. As a result, water stewardship is necessary to sustain the natural water cycle, which is interlinked with the Earth's climate and ecosystems.

Organizations are beginning to evaluate water risk and potential impacts on operations. Financial institutions and investment firms are evaluating climate-change-related business risks and are factoring water risks into investment and credit ratings and in evaluation of green investments.

The importance of water issues is recognized by the United Nations (UN) and reflected in several of the UN Sustainable Development Goals (SDGs). Water management policies are important for achieving global poverty alleviation goals, facilitating climate change adaptation, and expanding international cooperation and capacity-building support in developing countries, and will require implementation of integrated water resources management at all levels, including through transboundary cooperation. Water management policies are important to ensure a sufficient and constant supply of water under increasing scarcity.

Water initiatives related to measuring and evaluation of risks rely on reliable and credible science- based information. This growing need to evaluate and manage water risks requires confidence in water information, and is resulting in a need for verification and validation of water statements.

This document provides the requirements and guidance for verification and validation activity, whether used in combination or independently, that can enable a verifier or validator to issue an opinion on a water statement (or agreed-upon procedures findings) that are attributed to any organization, project or normalized unit (e.g. product). Water information that is subject to verification is historical in nature, while validation relates to the outcome of future events. User(s) of this document are responsible for determining how to apply the requirements of this document in relation to the context and type of the applicable water programme.

IS 19328 : 2025 Fire Resistant Glass — Specification

Fire-resistant glass plays a critical role in ensuring the safety of buildings, occupants, and assets. It is designed to contain fire, smoke, and heat, thereby providing vital escape routes and protection to the building's structural integrity. However, the effectiveness of fire-resistant glass depends on its design, manufacturing, and installation, making it crucial to have standardized procedures in place. Standardization ensures that fire-resistant glass products meet the minimum requirements in terms of fire resistance, optical clarity, impact resistance, and other important properties. It also ensures that the product's performance is consistent across different manufacturers and suppliers, making it easier for architects, builders, and safety regulators to specify, approve, and install fire- resistant glass in buildings. The fire-performance of the glass will only be achieved together with a tested system.

There is no ISO specification available on the subject.