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# Bijlage 1: Flowchart justification industrial radiography and location

The following flowchart outlines the steps that need to be taken before radiography inspection can be conducted at a specific location. On the next page, a brief explanation is provided for each step to be taken.



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## Process Step 1: Justification

The NDT (Non-Destructive Testing) customer justifies the use of industrial radiography as a non-destructive testing technique. In this process, the customer should first assess whether there are alternative inspection techniques that can be requested as a replacement for radiography. If industrial radiography is the designated inspection technique, the customer fills out the justification form and submits it to the NDT-company. The justification should clearly specify the inspection standard on which the examination is based. If there is no standard, the customer must indicate the necessity of the requested radiography examination.

#### Process Step 2: Evaluation by the NDT Company

The NDT-company receives and evaluates the completed justification. If the reference to the standard or risk analysis correctly demonstrates the necessity for industrial radiography, the process can proceed to the next step. If the justification is not sufficient, radiography examination cannot be conducted.

#### Process Step 3.a: Bunker

Industrial radiography should, as much as possible, be performed in a bunker. This is mandatory for objects that are no larger than 1 cubic meter and do not weigh more than 500 kilograms. The bunker must have a compliance certificate issued by a recognized expert in the physical services. The NDT-company justifies the use of radiographic technique based on quality requirements and the welds to be inspected.

If the objects to be examined are larger than the specified criteria, alternative inspection locations must be considered, with additional safety requirements.

### Process Step 3.b: Irradiation Infrastructure

If the use of a bunker is not possible, the work must be carried out in an irradiation infrastructure, which consists of suitable fixed shielding and adequate safety provisions approved by a recognized expert. The NDT-customer and NDT-company must conduct a risk analysis to determine what additional safety measures are required. If it turns out that the chosen location is not justified, the assignment should be declined and potentially revised. If the justification is valid, the physical control service must approve the risk analysis. The NDT-company justifies the use of radiographic technique based on quality requirements and the welds to be inspected.

#### Process Step 3.c: Site

If the use of irradiation infrastructure is not possible, the work can be carried out at a site (work location). For this work location, the NDT-customer and the NDT-company must conduct a risk analysis to examine which additional safety measures need to be taken. If it is determined that the chosen location is not justified, the assignment should be declined. If the justification is valid, the physical control service must approve the risk analysis. The NDT-company justifies the use of radiographic technique based on quality requirements and the welds to be inspected.

#### **Definition of Risk Analysis:**

A risk analysis is a document that identifies relevant safety risks and control measures. The NDT-customer and the NDT-company together identify all the risks that occur in the workplace, including both radiological and conventional workplace risks. Both parties must take control measures to manage all these risks. This analysis must be documented in writing and approved by the physical control service of the NDT-company. There is no specific format or method mandated for this analysis.