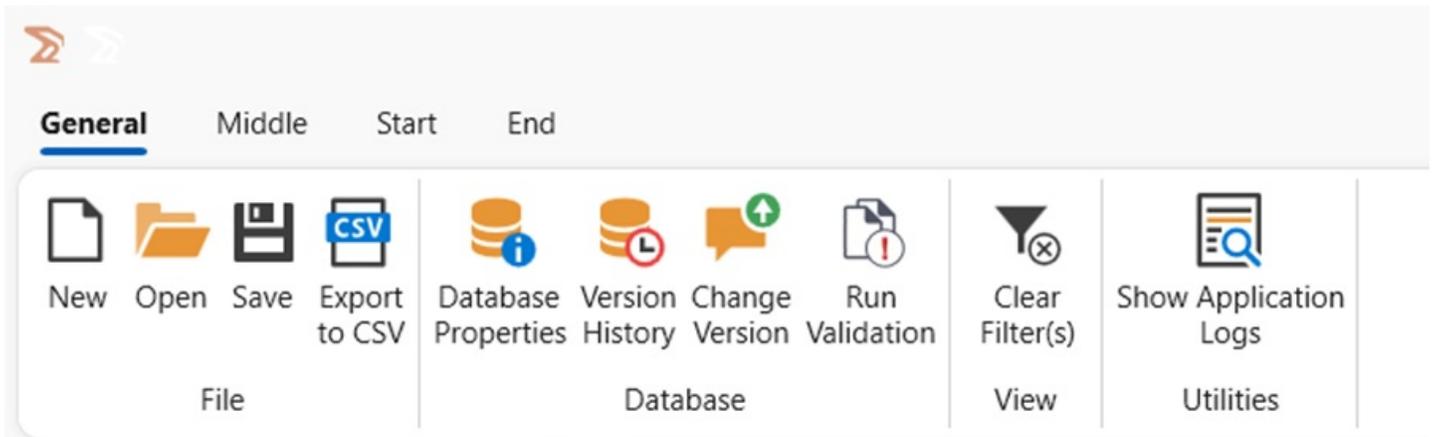


## Validation

Three different validations are conducted in the welding database. The objective is to ensure the comprehensive integrity of all joint criteria.

1. Click on the button “Run validation” that is only in the general tab of the header of the welding db.



Records with values out of range

Select/Deselect All

- MID\_LA06-0-H152SC
- MID\_LA06-0-V154SC
- MID\_TE06-090-H130SB
- MID\_TE06-090-V131SB
- MID\_LA06-0-H132SB
- MID\_LA06-0-V134SB
- MID\_LA08-0-H252SC
- MID\_LA08-0-V254SC
- MID\_TE08-090-H230SB
- MID\_LA08-0-H232SB
- MID\_TE06-095-V161SC
- MID\_TE06-100-V162SC
- MID\_LR06-3-H133SB
- MID\_LR06-3-H153SC

Records with identical and overlapping values

Select/Deselect All

- MID\_LA06-0-H152SC and 5 other(s)
- MID\_LA06-0-V154SC and 5 other(s)
- MID\_LA06-0-H132SB and 5 other(s)
- MID\_LA06-0-V134SB and 5 other(s)
- MID\_TE06-090-H130SB and 4 other(s)
- MID\_TE06-090-V131SB and 4 other(s)
- MID\_LA08-0-H252SC and 4 other(s)
- MID\_LA08-0-V254SC and 4 other(s)
- MID\_LA08-0-H232SB and 4 other(s)
- MID\_LA08-0-V234SB and 4 other(s)
- MID\_TE08-090-H250SC 2 and 2 other(s)
- MID\_TE08-090-H250SC and 2 other(s)
- MID\_TE08-090-H230SB and 2 other(s)
- MID\_TE08-090-V231SB and 2 other(s)

Reference Ids that are used by more than one record

Select/Deselect All

- MID\_TE06-090-H150SC
- MID\_TE08-090-H250SC 2

### 1.1 Invalid Records.

Invalid records are those containing at least one welding criteria that does not comply with the specified rules for them.

All records that have at least one  should be listed in the Invalid Records table.

### 1.2 Duplicate Records

- We categorize criteria into two types: single value-based and range-based.

- *Single value-based* criteria apply to the properties of Special Joint Type, Surface Finish, Part Interface Orientation, Aperture Angle, Floor Angle, Pass Number and Total Pass Number.
- The second type is *Range-based criteria*, which involve Weld Leg Size, Wall Height, Floor Width, Joint Edge Radius, Wall Thickness, and Floor Thickness.

- Definition of DUPLICATE:

- Recipes are considered duplicates when:

In the context of range-based criteria, overlap indicates the presence of a common region or at least one shared value between the two sets of values.

In the context of range-based criteria, overlap indicates the presence of a common region or at least one shared value between the two sets of values.

For example, if we have ranges [0,8] and [4,9], they overlap because 4 falls within the range of 0 and 8.

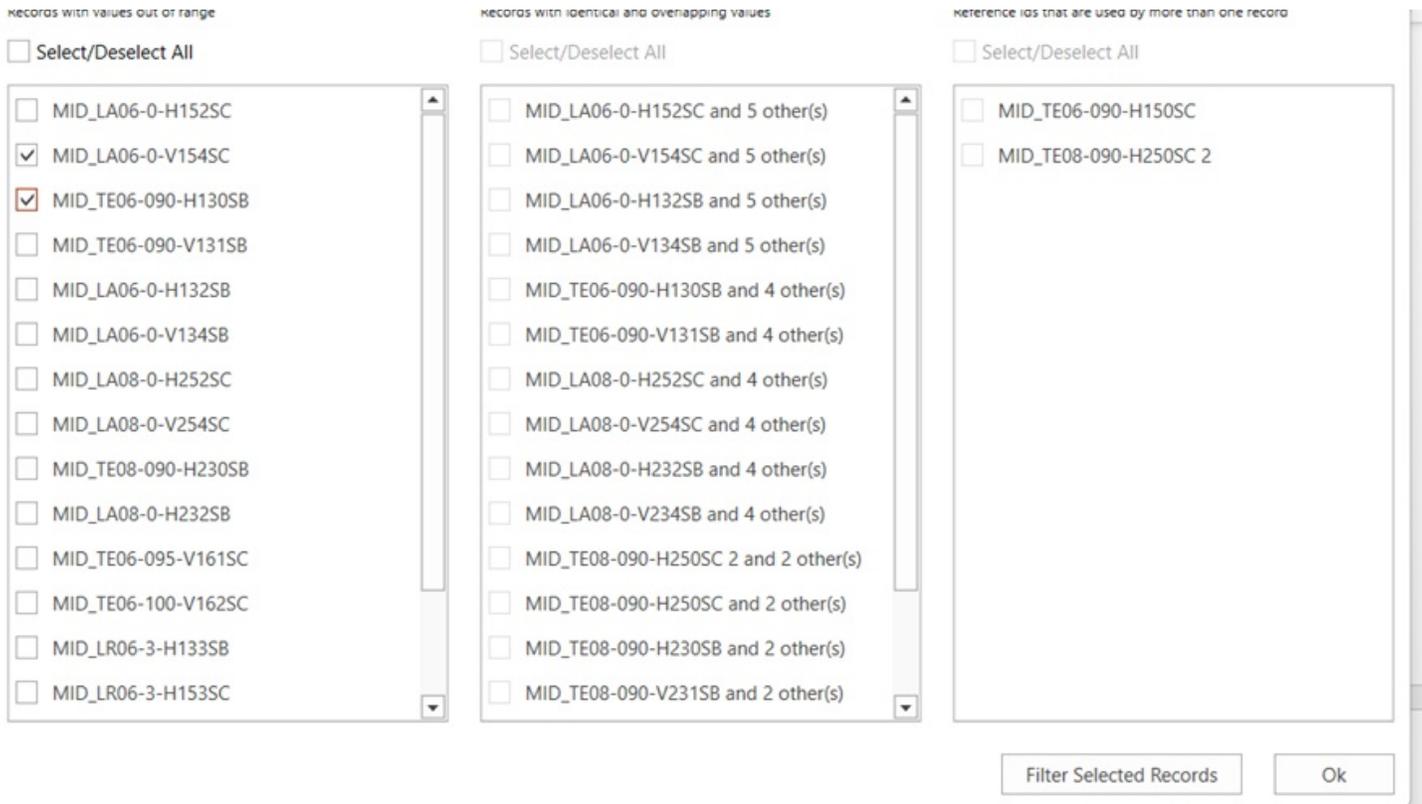
### 1.3 Identical References Ids

Identical reference IDs refer to at least two or more joint criteria sharing the same reference IDs.

## 2. Usage of the Validation window

The Validation window allows you to filter recipes based on their presence in each box.

However, there's a restriction: you can filter only one box at a time. To achieve this, simply check the checkboxes next to the Reference Ids corresponding to the desired box. Keep in mind that the list within each box contains MIDDLE, START, and END recipes all together.



The screenshot shows a validation window with three columns of records. Each column has a 'Select/Deselect All' button at the top. The first column, 'records with values out of range', contains 16 items, with 'MID\_TE06-090-H130SB' checked. The second column, 'records with identical and overlapping values', contains 16 items, all unchecked. The third column, 'reference ids that are used by more than one record', contains 2 items, both unchecked. At the bottom right, there are 'Filter Selected Records' and 'Ok' buttons.

records with values out of range	records with identical and overlapping values	reference ids that are used by more than one record
<input type="checkbox"/> MID_LA06-0-H152SC	<input type="checkbox"/> MID_LA06-0-H152SC and 5 other(s)	<input type="checkbox"/> MID_TE06-090-H150SC
<input checked="" type="checkbox"/> MID_LA06-0-V154SC	<input type="checkbox"/> MID_LA06-0-V154SC and 5 other(s)	<input type="checkbox"/> MID_TE08-090-H250SC 2
<input checked="" type="checkbox"/> MID_TE06-090-H130SB	<input type="checkbox"/> MID_LA06-0-H132SB and 5 other(s)	
<input type="checkbox"/> MID_TE06-090-V131SB	<input type="checkbox"/> MID_LA06-0-V134SB and 5 other(s)	
<input type="checkbox"/> MID_LA06-0-H132SB	<input type="checkbox"/> MID_TE06-090-H130SB and 4 other(s)	
<input type="checkbox"/> MID_LA06-0-V134SB	<input type="checkbox"/> MID_TE06-090-V131SB and 4 other(s)	
<input type="checkbox"/> MID_LA08-0-H252SC	<input type="checkbox"/> MID_LA08-0-H252SC and 4 other(s)	
<input type="checkbox"/> MID_LA08-0-V254SC	<input type="checkbox"/> MID_LA08-0-V254SC and 4 other(s)	
<input type="checkbox"/> MID_TE08-090-H230SB	<input type="checkbox"/> MID_LA08-0-H232SB and 4 other(s)	
<input type="checkbox"/> MID_LA08-0-H232SB	<input type="checkbox"/> MID_LA08-0-V234SB and 4 other(s)	
<input type="checkbox"/> MID_TE06-095-V161SC	<input type="checkbox"/> MID_TE08-090-H250SC 2 and 2 other(s)	
<input type="checkbox"/> MID_TE06-100-V162SC	<input type="checkbox"/> MID_TE08-090-H250SC and 2 other(s)	
<input type="checkbox"/> MID_LR06-3-H133SB	<input type="checkbox"/> MID_TE08-090-H230SB and 2 other(s)	
<input type="checkbox"/> MID_LR06-3-H153SC	<input type="checkbox"/> MID_TE08-090-V231SB and 2 other(s)	

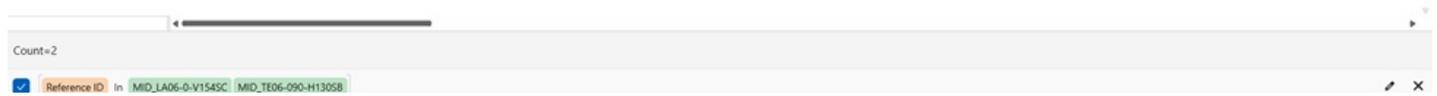
## 2.1 Filter Selected Records Behavior

2.1.1 When you choose at least one Reference Id from one box, the other two sections become unclickable. Additionally, their "Select/Deselect All" buttons are disabled. This limitation ensures that you can only filter by one type of validation issue at a time.

2.1.2 After selecting your Reference Id(s), clicking on "Filter Selected Records" will present you with a list of filtered records in the welding database. These records correspond to the chosen Reference Id(s).

2.1.3 To view the filtered results, pay attention to whether they fall into the categories of MIDDLE, START, or END. Additionally, you can find the Reference Ids you've selected displayed at the bottom of the DB Viewer. In picture below, those are the two Invalid records that were checked in the Validation Window.

MID_TE06-090-H1305B	AGT	Active	1/31/2024 11:30:04 AM	Any	Sandblasted (Scale0)	✖	0 mm	6.5 mm	8.5 mm	999 mm
MID_LA06-0-V1545C	AGT	Active	1/31/2024 11:30:04 AM	Any	Scaled (Scale100)	✖	0 mm	6.5 mm	5.5 mm	8.5 mm



2.1.4 You can conveniently choose or unselect all elements listed in one of the validation boxes using the “Select/Deselect All” feature. This streamlines your selection process.

2.1.5 In the Duplicate Records section, each recipe with at least one duplicate is grouped by reference ID. When you encounter a label like “ReferenceID and X other(s),” it signifies that the specified reference ID has X number of duplicates associated with it. If you select these duplicates and click on “Filter,” you’ll be able to view the reference ID along with the X elements it is duplicated with.

Records with values out of range

Select/Deselect All

- MID\_LA06-0-H152SC
- MID\_LA06-0-V154SC
- MID\_TE06-090-H130SB
- MID\_TE06-090-V131SB
- MID\_LA06-0-H132SB
- MID\_LA06-0-V134SB
- MID\_LA08-0-H252SC
- MID\_LA08-0-V254SC
- MID\_TE08-090-H230SB
- MID\_LA08-0-H232SB
- MID\_TE06-095-V161SC
- MID\_TE06-100-V162SC
- MID\_LR06-3-H133SB
- MID\_LR06-3-H153SC

Records with identical and overlapping values

Select/Deselect All

- MID\_LA06-0-H152SC and 5 other(s)
- MID\_LA06-0-V154SC and 5 other(s)
- MID\_LA06-0-H132SB and 5 other(s)
- MID\_LA06-0-V134SB and 5 other(s)
- MID\_TE06-090-H130SB and 4 other(s)
- MID\_TE06-090-V131SB and 4 other(s)
- MID\_LA08-0-H252SC and 4 other(s)
- MID\_LA08-0-V254SC and 4 other(s)
- MID\_LA08-0-H232SB and 4 other(s)
- MID\_LA08-0-V234SB and 4 other(s)
- MID\_TE08-090-H250SC 2 and 2 other(s)
- MID\_TE08-090-H250SC and 2 other(s)
- MID\_TE08-090-H230SB and 2 other(s)
- MID\_TE08-090-V231SB and 2 other(s)

Reference ids that are used by more than one record

Select/Deselect All

- MID\_TE06-090-H150SC
- MID\_TE08-090-H250SC 2

Filter Selected Records

Ok

Reference ID	Source	Active	Last Modified	Special Joint Type	Surface Finish	Weld Leg Size Min	Weld Leg Size Max	Wall Height Min	Wall Height Max
MID_LA08-0-H2525C	AGT	Active	1/31/2024 11:30:04 AM	Any	Scaled (Scale100)	0 mm	8.5 mm	7.5 mm	10.5 mm
MID_LA06-0-H1525C	AGT	Active	1/31/2024 11:30:04 AM	Any	Scaled (Scale100)	0 mm	6.5 mm	5.5 mm	8.5 mm
MID_TE04-090-H8045C	AGT	Active	4/6/2020 2:02:58 PM	Any	Scaled (Scale100)	3.5 mm	4.5 mm	6.5 mm	999 mm
MID_TE05-090-H0655CTK	AGT	Active	4/6/2020 2:02:58 PM	Any	Scaled (Scale100)	4.5 mm	5.5 mm	7.5 mm	999 mm
MID_LA05-0-H0525C	AGT	Active	4/6/2020 2:02:58 PM	Any	Scaled (Scale100)	4.5 mm	5.5 mm	4.5 mm	7.5 mm
MID_TE05-090-H0505C	AGT	Active	4/6/2020 2:02:58 PM	Any	Scaled (Scale100)	4.5 mm	5.5 mm	7.5 mm	999 mm

Count=6

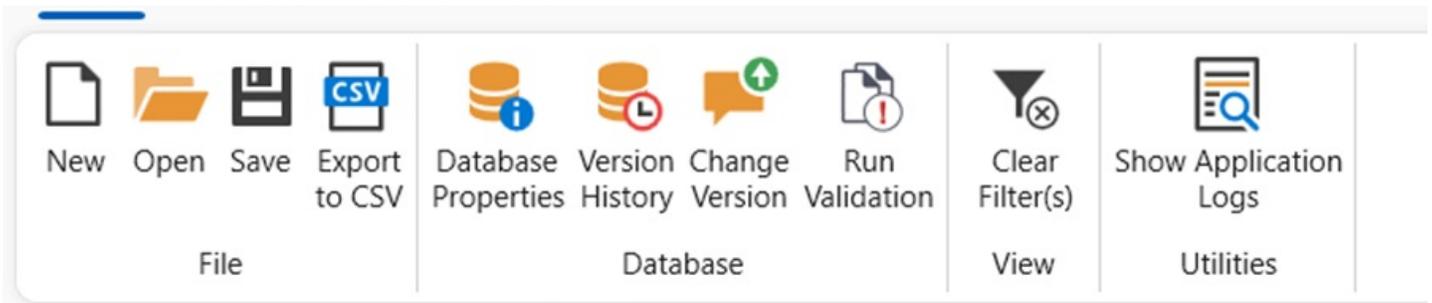
Reference ID In MID\_LA06-0-H1525C MID\_LA08-0-H2525C MID\_TE05-090-H0505C MID\_LA05-0-H0525C MID\_TE05-090-H0655CTK MID\_TE04-090-H8045C

## 2.2 OK Button Behavior:

- When you click the **“OK”** button in the validation window, it **immediately takes you back to the welding database** without applying any joint criteria filtering. This occurs even if you’ve selected specific validations.
- To view filtered results, you’ll need to click on the **“Filter Selected Records”** option.

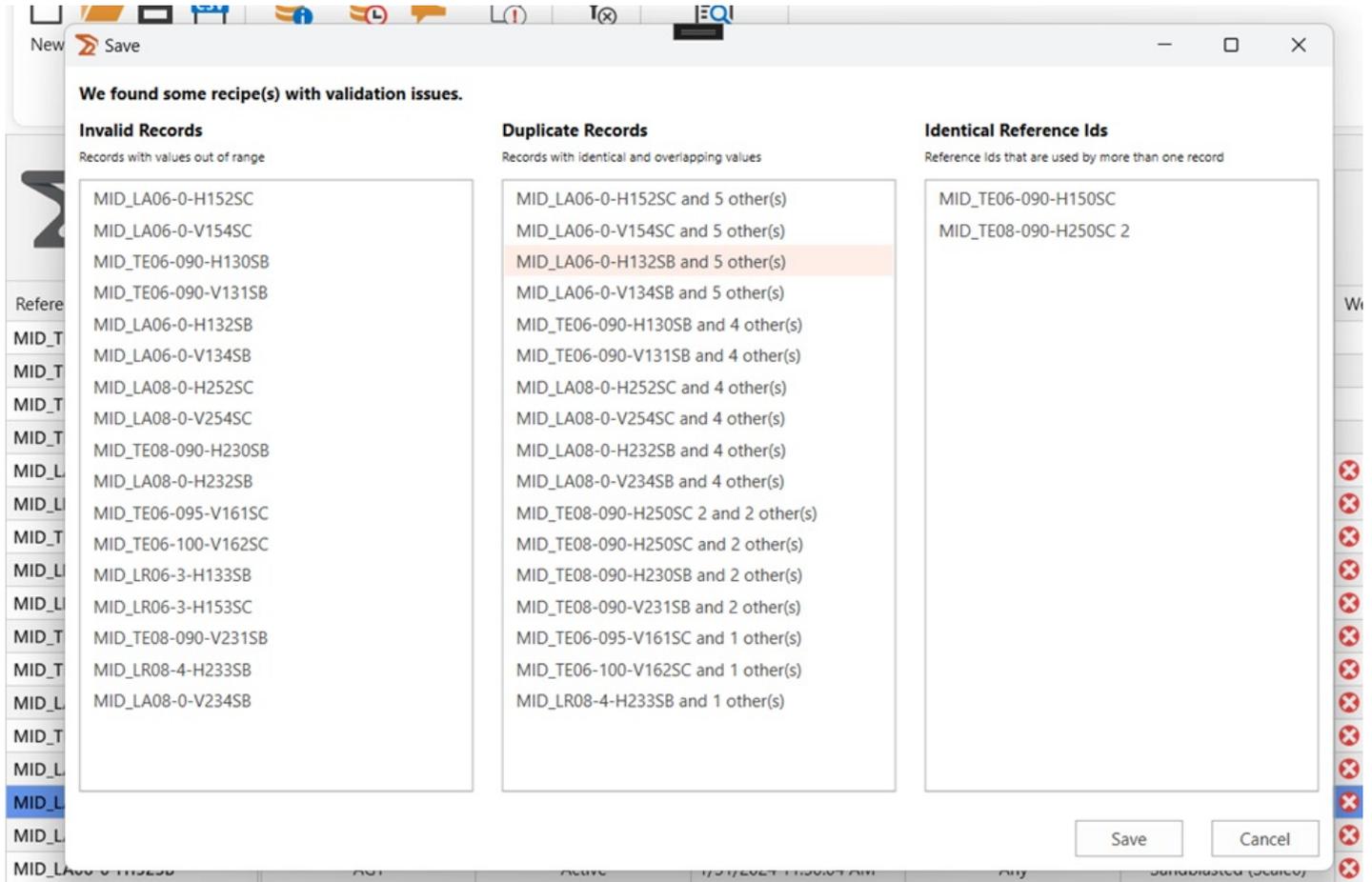
## 2.3 Clear Filter Button:

- The **“Clear Filter”** button allows you to **remove all filters** and return to the initial state.
- It’s accessible from any tab within the application.
- This button works for all types of filters activated in the application.



### 3. Usage of the Save Window

The “Save” button serves a dual purpose: it not only displays all three types of validation errors currently in the database but also allows you to save any changes made, even if there are duplicates or errors present. You can always revisit the “Run Validation” button to review and address any issues before finalizing the save.



**We found some recipe(s) with validation issues.**

Invalid Records	Duplicate Records	Identical Reference Ids
Records with values out of range	Records with identical and overlapping values	Reference Ids that are used by more than one record
MID_LA06-0-H152SC	MID_LA06-0-H152SC and 5 other(s)	MID_TE06-090-H150SC
MID_LA06-0-V154SC	MID_LA06-0-V154SC and 5 other(s)	MID_TE08-090-H250SC 2
MID_TE06-090-H130SB	MID_LA06-0-H132SB and 5 other(s)	
MID_TE06-090-V131SB	MID_LA06-0-V134SB and 5 other(s)	
MID_LA06-0-H132SB	MID_TE06-090-H130SB and 4 other(s)	
MID_LA06-0-V134SB	MID_TE06-090-V131SB and 4 other(s)	
MID_LA08-0-H252SC	MID_LA08-0-H252SC and 4 other(s)	
MID_LA08-0-V254SC	MID_LA08-0-V254SC and 4 other(s)	
MID_TE08-090-H230SB	MID_LA08-0-H232SB and 4 other(s)	
MID_LA08-0-H232SB	MID_LA08-0-V234SB and 4 other(s)	
MID_TE06-095-V161SC	MID_TE08-090-H250SC 2 and 2 other(s)	
MID_TE06-100-V162SC	MID_TE08-090-H250SC and 2 other(s)	
MID_LR06-3-H133SB	MID_TE08-090-H230SB and 2 other(s)	
MID_LR06-3-H153SC	MID_TE08-090-V231SB and 2 other(s)	
MID_TE08-090-V231SB	MID_TE06-095-V161SC and 1 other(s)	
MID_LR08-4-H233SB	MID_TE06-100-V162SC and 1 other(s)	
MID_LA08-0-V234SB	MID_LR08-4-H233SB and 1 other(s)	

Save Cancel