

Communication No. 2624

SINGLE & PAIR SKATING

GUIDELINES FOR INTERNATIONAL NOVICE COMPETITIONS 2024/25

This Communication replaces 2562

(¹ pending ISU Congress decisions)

Revised May 7, 2024

A. GENERAL

1. Entries

Entries to the competitions are made by the ISU Members (for International Competitions) or Clubs (for Interclub Competitions), which must be a member of the ISU Member, based on the age and the level of the Skaters.

2. Age requirements

Rule 108, paragraph 3)

c) In International Novice Competitions a Novice is a Skater who has met the following requirements before July 1st preceding the competition:

- i. Basic Novice - has not reached the age of fourteen (14).¹⁾
- ii. Intermediate Novice - has not reached the age of sixteen (16).¹⁾
- iii. Advanced Novice - has reached the age of ten (10) and has not reached the age of sixteen (16).¹⁾ for girls (Single & Pair Skating/Ice Dance) and boys (Single Skating) and eighteen (18).¹⁾ for boys (Pair Skating/Ice Dance).

3. Deductions for ALL Novice categories

a) Interruption

For every Interruption of:

- more than 10 seconds up to 20 seconds: -0.5
- more than 20 seconds up to 30 seconds: -1.0
- more than 30 seconds up to 40 seconds: -1.5

Interruption of the program with allowance of up to three (3) minutes to resume from the point of interruption:

-2.5 per program

b) Program time violation up to every 5 seconds lacking or in excess -0.5

c) Part of the costume/decoration falls on the ice -0.5

d) Costume/prop violation -0.5

e) Late start -0.5

f) Falls*

- per fall outside elements (one Skater only – Single and Pair Skating) -0.5
- per fall outside elements (both Skaters – Pair Skating) -1.0
- falls in elements will be called by the Technical Panel but with no deduction(s).

* A Fall is defined as loss of control by a Skater with the result that the majority of his/her own body weight is on the ice supported by any other part of the body other than the blades e.g. hand(s), knee(s), buttock(s), or any part of the arm (Rule 503, para 1).

As all the values of the deductions above are not the standard ones provided by Rules 353, paragraph 1.n), the Referee must give specific instructions to the system operator and check the correct input in each instance.

4. Officials

- a) Rule 420, paragraph 6, regarding the appointment of Officials apply, except for the requirement of their international qualification. However, the Referee, at least one (1) Judge and at least one (1) member of the Technical Panel must have an international qualification in each event. National officials may be aged from 21 years to 75 years.
- b) The same ISU Rules regarding judging, refereeing and the work of the Technical Panel apply as in Junior and Senior International Competitions.
- c) Rule 433, paragraphs 1 and 2: Reports of the Referee and of the Technical Controller.
Reports are not required for any Novice categories in Single and Pair Skating. In case of special incidences, the Referee for Basic Novice, Intermediate and Advanced Novice in Single and Pair Skating competitions shall inform the ISU by sending an individual report by email.

B. SINGLE & PAIR SKATING

1. General Requirements for Novice competitions Single and Pair Skating

Segments of events to be skated in Novice Single and Pair Skating competitions:

- a) Single Skating events shall consist of
 - Basic Novice Free Skating only
 - Intermediate Novice Free Skating only
 - Advanced Novice Short Program and Free Skating
- b) Pair Skating events shall consist of
 - Basic Novice Free Skating only
 - Advanced Novice Short Program and Free Skating
- c) Duration of the Programs:

Single Skating			
Basic Novice	Free Skating:	2:30 min,	+/-10 sec.
Intermediate Novice	Free Skating:	3:00 min,	+/-10 sec.
Advanced Novice	Short Program:	2:20 min,	+/-10 sec.
	Free Skating:	3:00 min,	+/-10 sec.
Pair Skating			
Basic Novice	Free Skating:	3:00 min,	+/-10 sec.
Advanced Novice	Short Program:	2:20 min,	+/-10 sec.
	Free Skating:	3:00 min,	+/-10 sec.

Various

- In Single Skating Boys and Girls for all Novice sub-categories: Warm-up groups can be maximum up to eight (8) Skaters.
- Warm up time: Basic Novice Free Skating 4 minutes, Intermediate Novice Free Skating 5 minutes, Advance Novice Short Program 4 minutes, Free Skating 5 minutes.
- There will be no special factor of 1.1 for jump elements performed in the second half of neither the Short Program nor the Free Skating in all Novice Categories. Instead, bonuses for achieved jumps are awarded for Advanced Novice Single Skating as per paragraph 2.3 below.
- If an extra jump(s) is executed, only the individual jump(s) which is not according to requirements will have no value. The jumps are considered in the order of execution.
- Illegal Elements/Movements for Novices are:
 - somersault type jumps;
 - lifts with wrong holds.

2. Technical Requirements for Novice Competitions Single Skating

2.1 Single Skating Basic Novice - Boys and Girls

A well balanced Free Skating program for Single Skating must contain:

- a) Maximum of five (5) jump elements one of which must be an Axel type jump. There may be up to two (2) jump combinations or one (1) jump combination **without using an Euler (half-loop)¹⁾** and one (1) jump sequence. Jump combinations and the jump sequence consist of two (2) jumps. In the jump sequence the second jump must be an Axel type jump with a direct step from the landing curve of the first jump into the take-off curve of the Axel jump.
One full revolution on the ice between the jumps (free foot can touch the ice, but without weight transfer) keeps the element in the frame of the definition of a jump sequence. Jumps executed in a jump sequence receive their full value.
An Euler (half-loop) when used in a jump combination or sequence between two listed jumps will be called but will not be considered as a listed jump, and will not be counted in the number of the jumps of the concerned combination or sequence. After the execution of the Euler (half-loop) no change of foot is allowed.
An Euler (half-loop) can be executed only once in the Free Skating.¹⁾
No triple or quadruple jumps are allowed.
Only one single jump and one double jump (including Double Axel) can be repeated once.
- b) There must be a maximum of two (2) spins of a different nature (abbreviation), one of which must be a spin combination and one must be a spin with no change of position and no change of foot.
The spin combination with a change of foot must have a minimum of eight (8) revolutions and without a change of foot with a minimum of six (6) revolutions. Flying entry is allowed. If with change of foot, only one level feature per foot will count.
The spin in one position without change of foot must have a minimum of six (6) revolutions, must be done in a basic position without any difficult variation positions and will be called maximum level basic. After the required revolutions it is allowed to execute difficult variations, but these will be ignored by the Technical Panel. Flying entry is not allowed.
- c) There must be a maximum of one (1) step sequence fully utilizing the ice surface and including at least one skating movement such as a spiral, spread eagle, Ina Bauer, hydroblading etc. If the skating movement is missing, no Level will be given. At least 2 difficult turns and steps must be executed on clean edges for Level basic. The Technical Panel will not award Feature 3) Use of body movements for at least 1/3 of the pattern and Feature 4) Two combinations of 3 difficult turns on different feet.

Levels explanations:

For Basic Novice Singles, in all elements that are subject to Levels, only features up to Level 2 will be counted. Any additional features will not count for Level requirements and will be ignored by the Technical Panel.

The following Program Components are judged:

- Composition
- Presentation
- Skating Skills

The factor for the Program Components is 1.67

2.2. Single Skating Intermediate Novice - Boys and Girls

Boys and Girls

A well balanced Free Skating program for Single Skating must contain:

- a) Maximum of 5 jump elements one of which must be an Axel type jump. There may be up to two (2) jump combinations or one (1) jump combination **without using an Euler (half-loop)¹⁾** and one (1) jump sequence. Jump combinations and the jump sequence consist of only two (2) jumps. In the jump sequence the second jump must be an Axel type jump with a direct step from the landing curve of the first jump into the take-off curve of the Axel jump. One full revolution on the ice between the jumps (free

foot can touch the ice, but without weight transfer) keeps the element in the frame of the definition of a jump sequence. Jumps executed in a jump sequence receive their full value.

An Euler (half-loop) when used in a jump combination or sequence between two listed jumps will be called but will not be considered as a listed jump, and will not be counted in the number of the jumps of the concerned combination or sequence. After the execution of the Euler (half-loop) no change of foot is allowed.

An Euler (half-loop) can be executed only once in the Free Skating. ¹⁾

No triple or quadruple jumps are allowed. Only one single jump and one double jump (including Double Axel) can be repeated once.

- b) There must be a maximum of two (2) spins of a different nature (abbreviation), one of which must be a spin combination and one must be a spin with no change of position.
The spin combination with a change of foot must have a minimum of eight (8) revolutions and without a change of foot with a minimum of six (6) revolutions, flying entrance is not allowed. If with change of foot, only one level feature per foot will count.
The spin in one position with a change of foot must have a minimum of eight (8) revolutions or spin in one position without change of foot must have a minimum of six (6) revolutions, flying entrance is allowed.
- c) There must be a maximum of one (1) step sequence fully utilizing the ice surface and including at least one skating movement such as a spiral, spread eagle, Ina Bauer, hydroblading etc. If the skating movement is missing, no Level will be given. At least 2 difficult turns and steps must be executed on clean edges for Level basic. The Technical Panel will not award Feature 3) Use of body movements for at least 1/3 of the pattern and Feature 4) Two combinations of 3 difficult turns on different feet.

Levels explanations:

For Intermediate Novice Singles, in all elements that are subject to Levels, only features up to Level 2 will be counted. Any additional features will not count for Level requirements and will be ignored by the Technical Panel.

The following Program Components are judged:

- Composition
- Presentation
- Skating Skills

The factor for Program Components is

- for Boys 2.0
- for Girls 1.7

2.3 Single Skating Advanced Novice - Boys and Girls

Boys

The Short Program for Boys' Single Skating shall consist of the following elements:

- a) Single Axel Paulsen or double Axel Paulsen
- b) Double or triple jump, may not repeat jump a)
- c) One jump combination consisting of two double jumps or one double and one triple jump, the second jump must be double or triple **Toe loop** (for season 2024/25), both jumps may not repeat jump a) or b)
- d) **Sit spin** with change of foot and no flying entrance (minimum of five (5) revolutions on each foot) (for season 2024/25).
- e) Spin combination with only one change of foot (minimum of five (5) revolutions on each foot), flying entrance not allowed.
- f) One step sequence fully utilizing the ice surface. For feature 4) Two combinations of 3 difficult turns on different feet: the combinations must include forward outside rocker and backward inside loop (for season 2024/25), they can be in the same combination or one in the first and the other in the second. Only one difficult turn may be repeated once in the two combinations. At least 2 difficult turns and steps must be executed on clean edges for Level basic.

Girls

The Short Program for Girls' Single Skating shall consist of the following elements:

- a) Single Axel Paulsen or double Axel Paulsen

- b) Double or triple jump, may not repeat jump a)
- c) One jump combination consisting of two double jumps or one double and one triple jump, the second jump must be double or triple **Toe loop** (for season 2024/25), both jumps may not repeat jump a) or b)
- d) Layback/sideways leaning spin or **sit spin** with no change of foot (minimum six (6) revolutions) and no flying entrance (for season 2024/25).
- e) Spin combination with only one change of foot (minimum of five (5) revolutions on each foot), flying entrance not allowed.
- f) One step sequence fully utilizing the ice surface. For feature 4) Two combinations of 3 difficult turns on different feet: the combinations must include forward outside rocker and backward inside loop (for season 2024/25), they can be in the same combination or one in the first and the other in the second. Only one difficult turn may be repeated once in the two combinations. At least 2 difficult turns and steps must be executed on clean edges for Level basic.

Jumps not according to Short Program requirements (wrong number of revolutions) will receive no value. If the same jump is executed as a solo jump and as a part of the jump combination, the repeated jump will not be counted (if this repetition is in a jump combination, only the individual jump which is not according to the above requirements will not be counted). **An Euler jump cannot be included in the Jump combination in the Short Program. ¹⁾**

Boys and Girls

A well balanced Free Skating program for Single Skating Boys and Girls must contain:

- a) Maximum of 6 jump elements one of which must be an Axel type jump. There may be up to two (2) jump combinations or one (1) jump combination **without using an Euler (half-loop) ¹⁾** and one (1) jump sequence. One jump combination or jump sequence can consist of up to three (3) jumps, the other up to two (2) jumps. A jump sequence consists of two or three jumps of any number of revolutions, in which the second and/or the third jump is an Axel type jump with a direct step from the landing curve of the first/second jump into the take-off curve of the Axel jump. One full revolution on the ice between the jumps (free foot can touch the ice, but without weight transfer) keeps the element in the frame of the definition of a jump sequence. Jumps executed in a jump sequence receive their full value. Only two triple jumps can be repeated either in a jump combination or jump sequence. **An Euler (half-loop) when used in a jump combination or sequence between two listed jumps will be called but will not be considered as a listed jump, and will not be counted in the number of the jumps of the concerned combination or sequence. After the execution of the Euler (half-loop) no change of foot is allowed.** **An Euler (half-loop) can be executed only once in the Free Skating. ¹⁾** No quadruple jumps are allowed. Any single, double (including Double Axel) or triple jump cannot be executed more than twice in total. **The same type of jump independent of revolutions can be included not more than three times in the Free Skating program. ¹⁾**
- b) There must be a maximum of two (2) spins of a different nature (abbreviation). One spin must be a spin combination with a change of foot which must have a minimum of eight (8) revolutions, a flying entrance is not allowed. One spin must be a flying **camel** spin which must have a minimum of six (6) revolutions, a change of foot is allowed but a change of position is not allowed (for season 2024/25).
- c) There must be one Choreographic Sequence¹⁾ consisting of at least two different **skating¹⁾** movements.

Bonus for Advanced Novice Single Skating

Skaters can earn bonus points for jumps that are achieved in Short Program and/or Free Skating. To be eligible for bonus points, jumps must be fully rotated or landed on the quarter (q) and must be in accordance with the Short Program requirements as well as the well balanced Free Skating program and the repetition rules for jumps. Jumps can be performed as a solo jump, or in jump combination or jump sequence. Jumps that are identified by the Technical Panel as under-rotated (<), downgraded (<<), with wrong edge (e) or have a fall or being identified as invalid element (*) are not eligible to receive bonus points. However, if in a jump combination or sequence there is a fall on a jump other than the bonus-generating jump, the bonus is still

received. For example, 3Sb+2T with a fall on the 2T. If an element has attention (!) and quarter (q), it is still valid for bonus points.

- **Short Program:**

In the Short Program a maximum of two (2) bonus points can be achieved: one (1) bonus point for one (1) Double Axel and one (1) bonus point for one (1) triple jump.

- **Free Skating:**

In the Free Skating Program, a maximum of three (3) bonus points can be achieved: one (1) bonus point for one (1) Double Axel and one (1) bonus point each for any two (2) different triple jumps.

In case of jump combinations or jump sequences, all jumps eligible for a bonus point in accordance with the above regulations and limitations can receive bonus points. For example, 3Sb+2Ab+seq.

The Technical Panel will decide upon the bonus points and add them respecting the above regulations and limitations to the respective jump element(s). The Technical Controller will advise the Data Operator to add the bonus point at the end of the jump by using the respective "Bonus" button on the Data Operator's screen (i.e. 2Ab, 3Lzqb+3Tb) during the review process.

The bonus will be assigned to the first two jumps in Short Program and to the first three jumps in Free Skating that fulfill the requirements in order of their execution.

In accordance with ISU Rule 353 (ISU Judging System - determination and publication of results) paragraph 1. (Basic Principles of Calculation) and respective subparagraph f), the panel's score for each Section/Element is determined by adding the trimmed mean GOE of this Section/Element to its Base Value. The bonus points are added in addition and will determine the panel's score for jump elements where the Technical Panel identifies such bonus points (Base Value + GOE + Bonus Point(s) = Score of Panel).

Levels explanations:

For Advanced Novice Single Skating, in all elements that are subject to Levels, only features up to Level 3 will be counted. Any additional features will not count for Level requirements and will be ignored by the Technical Panel.

The following Program Components are judged:

- Composition
- Presentation
- Skating Skills

The factors for the Program Components are

- a) Short Program
 - for Boys 1.20
 - for Girls 1.07
- b) Free Skating
 - for Boys 2.40
 - for Girls 2.13

3. Technical Requirements for Novice Competitions Pair Skating

3.1 Pair Skating Basic Novice

Basic Novice competitions will consist of a Free Skating program only.

A well balanced Free Skating program must contain a maximum of:

- a) Two lifts, from Group 1 and/or from Group 2, one arm holds not allowed (full extension of the lifting arm of the partner is not required)
- b) One throw jump (single)
- c) One solo jump (single or double)

- d) One solo spin in one position or one pair spin.
The solo spin can be executed with a change of foot and a minimum of eight (8) revolutions in total or without a change of foot and a minimum of five (5) revolutions. The pair spin must be executed with a minimum of five (5) revolutions.
- e) One pivot figure
- f) One step sequence fully utilizing the ice surface

Levels explanations:

For Basic Novice Pair Skating, in all elements that are subject to Levels, only features up to Level 2 will be counted. Any additional features will not count for Level requirements and will be ignored by the Technical Panel.

The following Program Components are judged:

- Composition
- Presentation
- Skating Skills

The factor for the Program Components is:

- Free Skating 1.33

3.2 Pair Skating Advanced Novice

The Short Program for Pair Skating shall consist of the following elements:

- a) One lift of Groups 1 to 4, one arm holds not allowed
- b) One twist lift (single or double)
- c) One solo jump (double)
- d) One solo spin combination with no change foot (minimum of six (6) revolutions)
- e) One death spiral
- f) One step sequence fully utilizing the ice surface

A well balanced Free Skating program must contain a maximum of:

- a) Two lifts both from Group 1 or from Group 2, or two different lifts from Groups 1 to 4, one arm holds not allowed, (in Group 1 and 2 full extension of the lifting arm of the partner is not required)
- b) One throw jump (double)
- c) One solo jump (double)
- d) One pair spin combination (minimum of six (6) revolutions)
- e) One death spiral
- f) One Choreographic Sequence consisting of at least two different skating¹⁾ movements by both partners

Levels explanations:

For Advanced Novice Pair Skating, in all elements that are subject to Levels, only features up to Level 3 will be counted. Any additional features will not count for Level requirements and will be ignored by the Technical Panel.

Pair Skating Lifts

Group 1 Lift where Girl's head remains up and she does not pass the Man's shoulder - possible grips to allow more variety, Hand to Armpit, Hand to Arm, Hand to Waist or Hand to Hand.

The following Program Components are judged:

- Composition
- Presentation
- Skating Skills

The factors for the Program Components are:

- Short Program 1.07
- Free Skating 2.13

Additional Guidelines and Clarifications for Officials at Single & Pair Skating Novice Competitions Season 2024/25

GENERAL

Evaluation of skaters should support the development of young skaters so that they learn a good skating technique and as well as good basic technique in jumps, spins, steps and choreographic movements. The focus is on quality and variety in elements.

GOE Evaluation

Jumps: correct jumping technique, clean take-off (toe jumps from proper toe), good air position, direction of jumps and clean landing.

Spins: correct basic positions with quality position of the body, including placement of free foot, arms, upper body and head. Correct change of foot is important without a long curve of exit or curve of entry. In flying spins there should be a clear jump with good air position. Difficult variations are not the key factor in spins and should be added only after the basic positions are executed with good quality.

Step Sequences: focus on turns and steps done well with correct, deep edges rather than doing a lot of turns during the step sequence with weak quality. Maintaining good body control and lean on the edge is important. Step sequences should show a good skating technique of the skater while also focusing on a connection to the music and presenting the program during the element.

Choreographic sequences: quality of body positions and movements without long breaks in between the movements; these movements should reflect the choreography of the program and follow the character of the music.

Program Components

Choice of music should fit the skater/pair as well as their age.

Composition: placement of the jumps and spins using different areas of the ice, step and choreographic sequences covering the ice in a varied and interesting way. Elements are connected with different kinds of movements that follow the musical phrasing and show a multidimensional aspect. Composition supports the skills and the development of the skater.

Presentation: skater acknowledges the music, presents the program with energy, and engages with the music. Both partners in pairs are performing and expressing the music in an equal way together.

Skating Skills: basic skating technique with good body and core control, balance, demonstrating different skating directions (forward/backward – clockwise/counter-clockwise), clean edges, variety of steps and turns with a soft knee bend.

Clarifications for Novice Singles

Basic Novice

Spin in one position without change of foot:

Technical Panel: Will be called maximum Level basic if there are 3 revolutions in the spin with 2 revolutions in basic position. Difficult variations may be performed after 6 revolutions. If executed earlier, the spin will have no Level.

Judges: Evaluate correct basic positions with quality position of the body including placement of free foot, arms, upper body, and head. If a skater performs difficult variations after 6 revolutions, this will not increase the GOE.

Combination spin with or without change of foot:

Technical Panel: If with change of foot, only one level feature per foot will count. If two features are done on the first foot, only one feature will be awarded.

Step sequence:

Technical Panel: Must include at least one skating movement such as a spiral, spread eagle, Ina Bauer, hydroblading etc. If the skating movement is missing, no Level will be given. At least 2 difficult turns and steps must be executed on clean edges for Level basic. The Technical Panel will not award Feature 3) Use of body movements for at least 1/3 of the pattern and Feature 4) Two combinations of 3 difficult turns on different feet.

Judges: Evaluate the quality of the skating movement, how well it matches the music, how well it is connected to the step sequence. In regard to turns and steps, see the remarks above under GOE evaluation for step sequences.

Intermediate Novice

Step sequence

Technical Panel and Judges: See remarks in Basic Novice

Advanced Novice

Short Program

Technical Panel and Judges: c) One jump combination consisting of two double jumps or one double and one triple jump, the second jump must be double or triple **Toe loop** (for season 2024/25), both jumps may not repeat jump a) or b). If the skater performs Loop as second jump, this jump will receive * and judges final GOE must be -5.

Technical Panel: f) One step sequence fully utilizing the ice surface. For feature 4) Two combinations of 3 difficult turns on different feet: the combinations must include forward outside rocker and backward inside loop (for season 2024/25), they can be in the same combination or one in the first and the other in the second. The order of the turns is free. Only one difficult turn may be repeated once in the two combinations. At least 2 difficult turns and steps must be executed on clean edges for Level basic.

Clarifications for Novice Pairs

Basic Novice

Technical Panel: a) The two lifts can be from the same group or different groups, but only Group 1 and Group 2. Take-off needs to be different.

Advanced Novice

Free Skating

Technical Panel: a) The two lifts can be from the same group if they are from Group 1 and Group 2. Take-off needs to be different. If Group 3 and/or Group 4 lifts are performed, the two lifts cannot be from the same group.

Program Components – Single & Pairs, Ice Dance and Synchronized Skating

Composition	Presentation	Skating Skills
The intentional, developed and / or original arrangement of the repertoire of all types of movements into a meaningful whole according to the principles of proportion, unity, space, pattern and musical structure.	The demonstration of engagement, commitment and involvement based on an understanding of the music and composition.	The ability of the skater to execute the skating repertoire of steps, turns and skating movements with blade and body control.
Multidimensional movements and use of space	Expressiveness & projection	Variety of edges, steps, turns, movements and directions
Connections between and within the elements	Variety and contrast of energy and of movements	Clarity of edges, steps, turns, movements and body control.
Choreography reflecting musical phrase and form	Musical sensitivity and timing	Balance and glide
Pattern and ice coverage	Unison, ¹⁾ “Oneness and awareness of space” (Pair Skating, Ice Dance, Synchronized Skating)	Flow
Unity		Power and speed
		Unison (Pair Skating, Ice Dance, Synchronized Skating). ¹⁾

Serious Error(s)			
<p>Serious errors are falls and/or mistakes which result in a break in the delivery of the program. This break can be minimal or more pronounced and noticeable. These errors must be reflected in the mark awarded for each program component. The consequence depends on the severity and impact they have on the fluidity and continuity of the program. The following guideline should be used.</p>			
Category	Mark range	Definition	Errors
Platinum	10	Outstanding	No errors
Diamond	9.75	Excellent	No serious errors
	9.00 – 9.50*		Only 1 serious error
Gold	8.00 – 8.75**	Very good	2 or more serious errors
	7.00 – 7.75	Good	
Green	6.00 – 6.75	Above average	<p>For all Components:</p> <p>*When there is only one error and this error minimally impacts the program, the maximum score of 9.50 is possible as noted above.</p> <p>Note: For the above to apply, the program as a whole is still deemed to be “Excellent”.</p> <p>**When there are 2 or more errors and these errors only minimally impact the program, the maximum score of 8.75 is possible.</p>
	5.00 – 5.75	Average	
Orange	4.00 – 4.75	Below average ¹⁾	
	3.00 – 3.75	Weak	
Red	2.00 – 2.75	Poor	
	1.00 – 1.75	Very poor	
	0.25 – 0.75	Extremely poor	

Note: an error by both partners, happening at the same time or not (e.g. Fall by 2) must be considered as 2 errors.
 Note: this basic principle applies equally when the errors occur within an element and/or outside an element

April 22, 2024

Jae Youl Kim, President
 Colin Smith, Director General